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CONTENTS

The Nesting of the Wilson Snipe	By George Miksch Sutton	191
Some Birds of the Ozark Region	By Johnson A. Neff	202
Identifying Birds Afield	By A. F. Ganier	216
Editorial		220
Field Notes		221
Notes—Here and There		223
Bird Banding Department		227
Communications		241
Publications Reviewed		243
Index		247

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THE WILSON BULLETIN

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NOTES ON THE NESTING OF THE WILSON'S SNIPE IN CRAWFORD COUNTY, PENNSYLVANIA

BY GEORGE MIKSCH SUTTON

It is thought by the writer that there is no published account of the nesting of Wilson's Snipe (*Gallinago delicata*) in western Pennsylvania; and even if there be such an account, the notes offered in this paper may prove interesting, particularly to the students of our own region,—many of whom, it is certain, are not aware that the bird nests with us.

The writer well knows that in disclosing the nesting grounds of this species, he exposes the whole region to the mercies of collectors who may have a set of eggs of this species as a particular local desideratum; but he also feels that sincere ornithologists will delight in knowing of such a region, and will do all in their power not only to protect the Snipe and other birds, but possibly to set aside the area as a State Preserve.

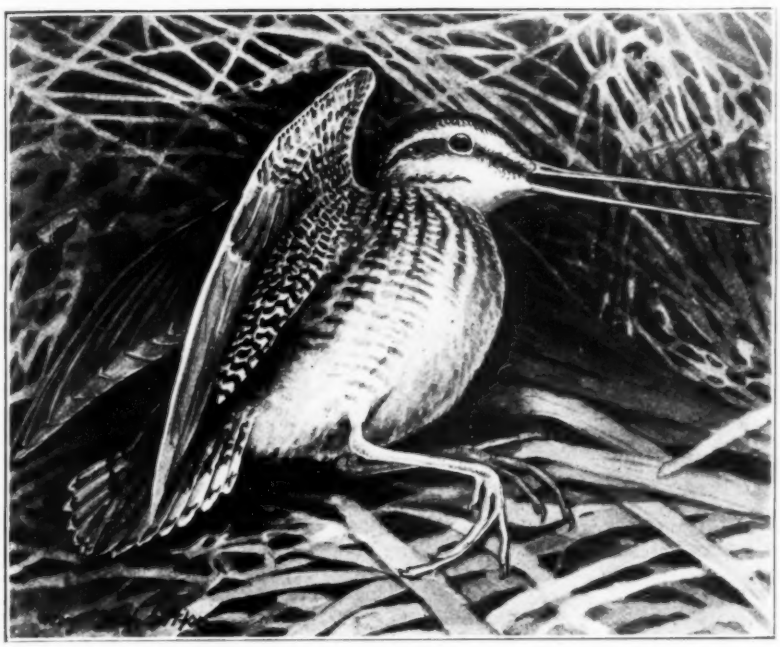
From April 27 to June 3, 1922, Pymatuning Swamp was the scene of the Carnegie Museum's field-labors for the spring season. This swamp is located in the Linesville Quadrant of Crawford County, but my base of operation was Hartstown, a small village about a mile north of the southern extremity of the swamp. From my quarters in this town it was possible to plunge almost immediately into the swamp proper, and many interesting birds nested not at all far from the railway station.

Although the tamarack and hemlock wooded regions are most interesting, and well worth a prolonged discussion from the ornithologist's standpoint, in this particular paper only the more open stretches of the swamp, or marsh-lands, will be considered, since here, and here only, occurred the Wilson's Snipe. During the early part of our sojourn, from April 27 to May 2, the weather was pronouncedly chilly; and Tree Sparrows were still more or less abundant. Nevertheless, on the first evening of our visit, numbers of Snipes were present, and many, if not all of them "bleating."

This wierdly beautiful sound is difficult to describe. Nor have I yet found a word which very aptly suggests the quality of the noise. "Bleating" it has often been called; also "whistling," "winnowing," and even "whinneying," all of which are in a way suggestive, but only incompletely so. While on the very scene, I spent some time trying to speak my impressions in a word, and I was a trifle disturbed by my total inability to find any means of doing so. There is a certain attendant sense of despair in finding oneself so helpless. Although this sound has some qualities of a bleat, I should say that the beginning of the wind song is too gradual, and the dying out too much prolonged to be given by this term. A bleat, as a usual thing, at least begins rather suddenly. The immature Black-backed Gull, for example, often gives forth a sound very appropriately to be called a bleat, which the natives of Labrador are pleased to term "bawling."

I must confess that there is for me in the Wilson's Snipe's courting song, a sobbing sound; and when thus described it brings to my mind the most satisfying tonal image of all. But perhaps the difficult matter of interpretation of sound had better be dismissed by saying that to be conceived properly it must first be heard. For a time I could not correlate the time of the song accurately with the wing beats of the bird. Always the rapid wing movements seemed to precede all the sound, and as nearly as I could tell, the bodily performance of the bird was over more or less, before the sound reached me. This was due, I believe, largely to the distance between me and the birds. For, after becoming somewhat desperate, I waded out to the middle of the marsh where, waist-deep in water, and with tall, dead cat-tails about my body, I could watch the birds to better advantage. A few yards above my new observation point would occasionally fly a performing Snipe. And thrilling it was to feel so intimately associated with things, particularly at that intimate time of the evening, when the whole marsh seemed to be in action. While a performing Snipe was flying over me I was conscious of a gentle, but distinct, vibration, such as I have heard at pipe-organ recitals. I did not realize this at first, because it was a delicate sensation. But I always felt it; and once or twice I actually seemed to feel some sort of vibration before any sound reached my ears. At least twice the bills of birds which performed above me were apparently opened some-

what; why, I cannot say, because I firmly believe that these courting songs have no vocal connections. During the producing of the sound, full powers of flight were not maintained for the bird practically always sank to a lower plane during the process.



Female Wilson's Snipe feigning crippledness. (No. 1).
(Drawing made from life sketches, by George Miksch Sutton.)

Rarely I heard suggestions of slight vocal twitterings similar to those of the Woodcock, but ordinarily their voices were not heard.

During the first part of May these aerial flights were observed daily, and, off and on, at any time. But the only really concerted movements were in the evening. Often while I was skinning birds, as late as midnight, the Snipes would still be sobbing out on the marshes. In the early morning they were not often heard, this period seeming to be devoted to searching for food. But during the day at least two or three birds, if not more, were heard constantly, and, if, the sky became overcast, one by one, up from the cat-tails went all the Snipes to join the usual twilight concert. The birds flew about in wide circles. By following one

individual it was ascertained that circles almost a half mile in diameter were sometimes described, although this was not usually the case. Later in the season, presumably when certain pairs of birds had left for regions further north, the air routes of the flying birds were much more confined, indicating, it seems to me, that attention was plainly focused on an objective point below. I wonder if it is certainly known that the female Snipes never indulge in these antics. The question naturally arises, because when first the Snipes were heard, in full evening concert, it was practically impossible to find a single Snipe anywhere on the ground. Never was one flushed at such times, that did not, after emitting a nervous "schkape" or two, circle higher, and join the performers. It is highly probable, in this connection, that the incubating females of the region actually were not flushed, simply because their nests were not closely enough approached; but concerning the female Snipes which were en route to more northern nesting grounds, I cannot say. These may have joined the males occasionally, if not regularly, in the flight antics.

This last statement, implying as it does, a wide difference in the nesting dates of individual pairs of Snipes, leads me to a discussion of the status of the species. Normally it has been considered of course only a migrant. Now, it must be regarded also as a summer resident, and furthermore, numerous records tend to show that it is not especially rare as a winter resident, depending of course on the weather conditions. The inhabitants of Hartstown spoke of seeing Snipes occasionally in winter as though it were no unusual thing; even so recently as in December of 1922, Wilson's Snipe was included in the Christmas Census from Mercer County; and two accurate observers have informed me that this species sometimes remains in small flocks. Thus, it is to be expected that the wintering individuals have progressed far in their nesting activities by the time the migrants from further south are passing through. This explains why the courtship flight movements were still very evident and constant when a week later, well incubated eggs were found. Some queer antics which were observed are still not satisfactorily explained to my mind however. On April 29 two birds were repeatedly flushed together; not always the same two individuals necessarily, I presume, and not certainly of opposite sex. But these birds often sailed gracefully over the cat-tails, in wide sweeping undulations, with wings set in a manner suggesting Chimney

Swifts, a type of flight totally different from any previously observed. The same stunt was many times observed in the male bird of the pair whose nest was located. In fact this type of display, if it were display, was so common that the usual twitching, erratic flight was only rarely seen. I have wondered if this may not have been a pair of birds, possibly recently mated, though not actually nesting there.

On May 3, in a portion of the swamp near town, a new antic was observed. A Snipe, subsequently determined as a male, sprang up close at hand, and after a few energetic, direct wingbeats, put his wings high above his body, and describing a graceful arc, dropped toward the ground, his legs trailing, only to rise again to repeat the performance. Never during this exhibition did he actually touch the ground with his feet, so far as I could see, but it gave that impression. He was clearly excited, and I now know that such antics are a certain indication of nesting activity. At such times the male gave forth several short notes which may accurately be termed "bleats." Occasionally the bird, after performing this novel antic would drop to the grass some distance away, and then fly up after a time, considerably nearer me, making it evident that he was attempting to lure me away. Then again, after trying these antics for a time, he would suddenly mount to the sky, and there would follow a season of the wierd wind music — always delightful.

Much time was spent in searching for a nest, and on account of failure to find even any certain indication of breeding, I was at the point of deciding that all these birds were simply passing through, and courting as they progressed. Again and again Snipes flushed almost under foot, and often their flushing was so hesitant, and so varied with antics that the area whence they sprang was literally combed before search was abandoned. The birds seemed particularly abundant in a treacherous waste stretch which had been burned over, the previous fall, and here, it seemed, a great percentage of the courtship was taking place. It was found later that one pair actually did nest here, at the edge of the burned area, but the first nest located was in the middle of the principal cat-tail marsh where the dried blades stuck up in confusion everywhere.

On May 4, while watching nest-building operations of a seclusive Swamp Sparrow there was occasion to tramp about a great deal in the cat-tails. Walking, or perhaps a better word,

progress, was difficult, because the depth of the water varied greatly, and it was impossible to tell from the surface just how far down the next step would take one. It was no unusual thing for the water to go over my hip-boot tops. As is usually the case, at least in my experience, the female bird flushed at a time when all thoughts of a Snipe's nest were for the time being abandoned. She left not in a great hurry, and in doing so,

Nest of Wilcon's Snipe. (No.2).
(Photograph by Norman McClintock.)

leaped straight into the air about three feet above her nest, whence, with legs dangling, tail wide-spread, and wings nervously jerking, she gradually let herself down to the ground about twenty feet away. For an instant, as she quivered above her eggs it seemed that she was considering returning to them, instead of leaving. I was within a few feet of the nest and as she left I could see plainly that she was looking at me. After she settled in the cat-tails I could scarcely see her, but I know that she was moving but little, and there was practically no demonstration. The male bird, however, came near, and almost

outdid himself in the matter of protests. Not only did he rise repeatedly into the air, to descend on set wings stiffly arched above his back, but he called constantly in a most agitated tone. These notes I had never heard before. After I had taken some measurements regarding the nest, and collected some surrounding material, the male bird flew to the sky, where in wide circles above me he indulged in the strange wailing-laugh.

The nest was beautifully situated in the center of a clump of dried fern stalks—a clump similar to hundreds of just such little islands near at hand, but certainly admirably suited to such a nesting site, for the eggs were almost completely surrounded at the short distance of four inches by a paling of dead fern stalks. The eggs were about nine inches above water at this time although the water's depth changed constantly with every rainfall, and five days later the outer rim of the nest was only two inches above water level. I wondered at the time of finding the nest what the young Snipe did when hatched, surrounded as they were by water several inches deep. But I have learned since then that young Snipe are not averse to deep water, and seem to negotiate it without difficulty. The eggs in this nest were far advanced in incubation. They would probably have hatched within a week. Thus I realized that if other nests were not found very soon, our chances of seeing more Wilson's Snipe eggs were very few.

From May 6 on Snipes were seen daily. Sometimes several of them were flushed from a likely nesting area, but never did their actions suggest flushing from a nest, or even anxiety concerning it. I judged, therefore, that these were mainly migrating birds pausing on their northern journey for a few days. This supposition proved correct, for after the tenth of May, Snipes were not often seen, and when they were observed their actions always indicated a nest nearby.

At least twice during the period after finding this first nest, I saw a male bird standing on the ground near me,—a rather unusual thing, since they were not as a rule seen until flushed. In both instances, the bird was very much squatted, and, judging from the apparent tension of his body, ready to spring into air at any instant.

On May 17 further proof was found that the Wilson's Snipe is a nester in Pymatuning Swamp. In a very small marshy area—scarcely a rod square,—lying in an open field near the cat-tail

swamp, I flushed a female Snipe, which threw herself about so frantically that I knew at once there were eggs or young. A brief search revealed two of the young birds, fairly well developed, but still in the down. The mother's antics so claimed my attention that I did not keep close enough watch of the young, and eventually was unable to find them. I hesitated to tramp about much at the time for fear of stepping upon them. The mother bird grunted and clucked incessantly and fell upon her side uttering wierd cries, and beating her wings pitiably. At times she would dart into the air and circle about in great haste, very close to me, and alight in the tall grass, whence she would run gracefully away until she was again plainly in view. As she ran about her head was held rather stiffly, and it seemed that moving it from side to side much caused her inconvenience. In fact, once or twice, a definite impression was given that she was carrying something in her mouth, her head was held at such a strained angle. I have always regretted that it was necessary to leave this little domestic scene, without further observance of the little ones, but I was called away, and never saw any of those birds again. I marvelled at the time that so small a patch of tall grass should have been selected as a nesting site. Experience since then has taught me that this area was not, indeed, the nesting site, but a feeding or refuge ground to which the mother had led the young as soon as they were strong enough to follow her. The actual nesting grounds were restricted to the larger marshes.

On May 15, 1923, I resumed field operations at the swamp, and within a few hours after arrival had located a Wilson's Snipe nest (No. 2), in exactly the same section of the swamp as that where the 1922 nest with eggs was found. The female bird left rather quietly and made no protest. She was heard calling softly among the distant cat-tails, however, and by the increase in the volume of the sound, I could tell she was coming nearer. This nest was built upon a bit of decayed, sunken log and was composed entirely of grass stems rather carefully laid together. The eggs were but a few inches above the surface of the water, and although grass stems connected the nesting site with other vegetation the nest was virtually on an island surrounded by water eighteen inches deep. The water-level, by the way, was at this time, unusually low, being fully fifteen inches lower than it had been the year before on the same date,

so that it was now possible to walk about a large area of the swamp without boots at all. The Snipes, however, built their nests only in the submerged areas, probably for protection. The eggs in this nest were not placed, as I had expected to find them, with all smaller ends toward the middle, but, as is shown in the photograph of Nest No. 3, with three small ends pointed in the same direction, and the remaining egg with its small end so inserted as to allow the set to occupy the smallest possible space. These eggs were not as much incubated as the set found on May 4, 1922, indicating either that this season was very much retarded, generally speaking, or that the present pair were migrants whose nesting operations necessarily started later than those of the permanent resident birds. On May 16, another nest (No. 3), with four eggs was found but a short distance from the first nest referred to. The eggs in this nest were even closer to the water level, and certain it is, that if there had been a day's steady rain, this and several other nests would have been submerged. The female bird at this nest was quite solicitous, and fell upon a clump of ferns beating her wings wildly. The eggs had been incubated not more than a week; the set was a particularly beautiful one, with heavy, handsome markings. Judging from the arrangement of the grass stems I should say that this nest either had been built up directly out of the water, or that the water level had recently been raised — which latter supposition is scarcely plausible since there had been no rain of any consequence for weeks. On May 17, Mr. Norman McClintock, who was with me, found yet another nest (No. 4) about a quarter of a mile from the two already located, which was situated in an unusual position. This nest was the only Snipe nest I have seen which had any real protection from above. The nest was so placed under a dead willow branch and some leaning cat-tail stalks, that it was really difficult to see it. The grasses composing the nest had been placed with care, and were somewhat woven about the cat-tail stalks and other grasses standing near. Mr. McClintock stated, when he reported the nest to me, that there were but three eggs in the nest. I was rather surprised at this. But when I observed the nest personally, I found an egg floating in the water a few inches from it; the female had kicked the egg out when she flushed. These eggs were already hatching, and although the young birds were inside the eggs, their fine, penetrating notes could be heard when

I was standing some distance away. While we watched this nest, which, by the way, was closer to the willow growth than any so far located, the female (?) bird flew rapidly by several times, but did not make a vocal noise or give further protest. I had the privilege of watching this bird on her nest for some time. The water near at hand was very shallow.

During these few days of observation, when Snipe nests were being located so constantly, I marvelled at the scarcity of the birds themselves. There was occasional evidence of courtship flights, and at night the wierd calling was often heard, but the Snipes were not often seen — not nearly so commonly at least as they were in 1922. This has led me to believe that during the previous year there may have been an abundant nesting Snipe population in some section of the swamp which we did not thoroughly enough investigate. And certain it was, that in a wide burnt-over area, during the previous year, numbers of courting Snipes were observed, where it was later impossible to spend much time searching for nests.

On May 29, with Messrs. Semple and Christy of Sewickley, I again visited the swamp, and had the good fortune to locate yet another nest a few hours after arrival at the nesting grounds. It was fast becoming dark and as I was wading hurriedly through tall cat-tails in an unfamiliar section of the marsh, I heard a significant flutter of wings near my feet. A brief investigation revealed the nest, again surrounded by water, and built into the debris that had collected about last year's cat-tail stalks. As I looked I felt certain that there were but two eggs, and I was wondering at the reason for an incomplete set so late in the season, when I realized that a dark portion of the nest was not a shadow, but a downy young bird, and in the water near-by floated another, so young and weak that he scarcely knew what was wrong, and less about how to improve conditions; he had been kicked out of the nest by the mother bird as she left. I picked the little creature out of the water: he floated very bouyantly, and was not at all wet. As he stood in my hand, with head drawn in, and bill not yet at all out of proportion as in the adult bird, I noticed the richness of his deep brown coloration, and the beauty and delicacy of the darker clouding and fine buffy spotting. When put back in the nest, I was relieved to find that he settled down peaceably. I had almost expected him to bolt off among the cat-tails. When I

family are mannerisms as distinct as among the woodpecker. was but a short distance away the female returned. I could hear her running through the water as she approached the nest.

On this evening the flight song of the male was again carefully observed, and it was determined that the whole performance ran rather imperfectly through at least six notes of the scale.

Nest of Wilson's Snipe (No. 3) showing surrounding water.
(Photograph by Norman McClintock.)

By imperfectly, I mean that the true notes were not given, there being always a tendency to a flat or sharp. I also rather satisfactorily compared the quality of the notes to the sound produced by blowing into a bottle or lead pipe. In some ways I think this is the best comparison yet made. The tones were primarily windy.

On the following day, which was the last on which Snipes were observed, an interesting thing happened. As we stood alongside the tracks, near the station at Hartstown, I noticed a Snipe circling low through the thickest of the smoke from the engine, and directly afterward hardly without any reason at

all, my eye fell upon a bit of dark brown near the rail on the nearby track,—a baby Wilson's Snipe. I picked it up in haste, and no sooner had done so than another little one appeared miraculously from under the huge, roaring train, and made straight for me. These little Snipes were well developed, and it was difficult to hold them delicately in my hands because they kicked so. I put them down by a little pool nearby, and I saw the mother join them shortly. By crawling carefully to the edge of the embankment I watched her run to the young ones and cover them. Upon seeing me she walked over them, and eventually led them into the higher grasses and weeds at the end of the pool.

Altogether it would seem from the above notes, that the Wilson's Snipe is a regular, fairly common breeder in the swampy areas of the northwestern part of Pennsylvania, and it should reasonably be expected to occur in the marshes similar to the cat-tail areas at Pymatuning throughout Erie, Warren, Crawford, Mercer, and northern Lawrence counties.

SOME BIRDS OF THE OZARK REGION

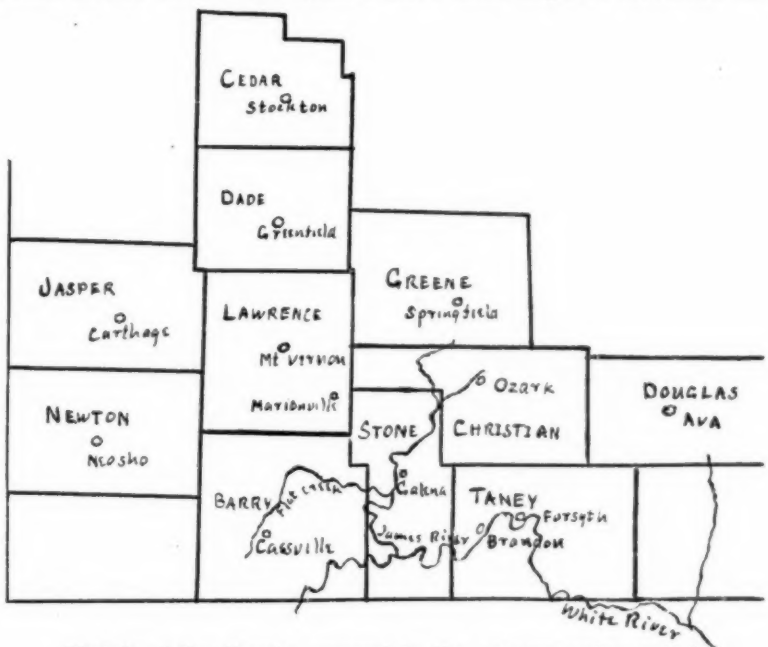
BY JOHNSON A. NEFF

When you read or hear anything derogatory to the Ozark region of Missouri and Arkansas do not let yourself be fooled into thinking that this region, famous in the comic columns of the daily papers, does not have its share of nature and especially of birds. Having lived all of my as yet rather short life in the Missouri Ozarks I admit a highly developed prejudice. I would not retract whatever I might say about the Ozarks for any cause whatever.

Since I made my advent onto the farm at the age of five I have always studied birds. As usual with most youngsters, much of my most interesting data was lost because I failed to keep dates and other interesting data. And now in the later years I must admit a lack of care and a lack of completeness and thoroughness in bird study, which has come from the necessity of making my study of birds a spare time pleasure, when spare time always seems to come at times when the birds are a minus quantity. For some time past, and for a year to come, I have been a student in the Missouri Agricultural College which has kept me out of the Ozark region for nine to ten months per year.

And during the time away from school each summer I have had to take my place along with my father in the attempt to make three men do the work of about four in the care of a large acreage of fruit, for we are commercial fruit growers. I do not complain of the work, but it is not the sort of work that will allow one to leave at the sound of a bird, nor even when birds are most common. I hope in the near future to do many of the things that I have failed to do in the past.

Volumes might be written about the Ozark region, and yet all would not be told. The Ozarks have their highest elevation in a



Sketch of the Ozarks covered in the accompanying article.

broad plateau which runs southwestward until it enters the above sketched counties in which it is found at an elevation of about 1,550 feet in Taney, Stone, and Barry counties. The area is interspersed with small streams and drains off mainly thru the James and White Rivers with tributaries. The region drained by these rivers is that portion with which the author is most familiar, having tramped and camped over it many times. This region comprises the heart of the Ozarks, the country of the Bald Knobbers, and of the "Shepherd of the Hills."

The plateau is broken by numerous water-courses which have

worn deep valleys on their way to their destinations in the Arkansas or the Missouri; here is the wild, rugged scenic portion of the Ozarks, in which birds abound. The Ozark border region is a less rugged belt that encloses the Ozarks; it is broken country sloping off toward a more or less high prairie region toward the north and east. The Ozarks are as yet still wooded, but the woods are going fast, and little effort is made to conserve natural resources other than to make use of them. In spots one can see many miles of timber, with little farms spotting it, if desirous of visiting the higher altitudes of the cliffs, and if one is lucky enough to find a high point that is not tree covered. The tree growth of the region, however, is not of great commercial value; it is comprised of oaks of several types, mainly blackjack and postoak. We still find a few groves of pines scattered thruout the region, and the greatest pine forests are in Stone and Taney counties; other trees that grow in the river valley sections are: Red Gum, White Oak, Red Oak, Black Oak, Burr Oak, Chestnut Oak, Willow Oak, Maple, Ash, Elm, Sycamore, Hickories, Walnut, Pecans, Hackberry, Sassafras, Mulberry, Box Elder. Of smaller growth we have abundance of Dogwood, Redbud, Papaw, Hazel, Spicebush, and others unknown to the author, intertwined with masses of wild grapes and other vines, and carpeted with a great multitude of smaller plants and flowers which would take a talented botanist to catalog correctly.

Climate has a great deal to do with our bird study here in the Ozarks. In the first place, if there happens to be a low precipitation during the late summer then all water courses dry up except the rivers, and as a rule waterfowl give us a fairly wide berth, not being attracted by our scanty water-sites. It has been a great many winters since we had a really severe winter season. Snow has been a matter of hours rather than days; winter birds have not been forced to us in the past few years. We find that bird study in this region is subject to a great variation in the seasonal climate and weather conditions. There are numerous streams, and the flora and fauna is unlimited.

For a space of fifteen years the writer has been a student of the birds of this region and is rather closely familiar with most of the region concerned, having spent a great many days roaming over the Ozarks both as a business and as a recreation. The following list of about 170 species of birds does not include several species of which the author is himself satisfied, but for

which there is not evidence sufficient to list the species. There is much room for additions. Many of the species that have been reported for our district, the observer has not been lucky enough to find during his travels over the mountains. But as time goes on, scarcely a season goes by without at least one or more additions to the list as given below.

No attempt has been made to go into the extinct species. It was my father's good fortune years ago to see an Ivory-billed Woodpecker close to the location of our orchards, and Passenger Pigeons were of course very abundant in the region. No attempt has been made to list any birds except those observed by the writer or by close friends of his who are followers of ornithology. Here is given a short list of some species which have been reported from the counties of which I speak and which are not regular or commonly found in the state. For these species I am indebted to Widmann's "Catalog of the Birds of Missouri." The species, county, and observer, follow:—

Parasitic Jaeger,	Christian County,	Kastendieck.
Ruddy Duck,	Southwest Missouri,	Nehrling.
Snowy Heron,	Christian County,	Kastendieck.
Northern Phalarope,	Christian County,	Kastendieck.
Pectoral Sandpiper (1887),	Lawrence County,	Nehrling.
White-rumped Sandpiper,	Lawrence County,	Nehrling.
Long-billed Curlew,	Jasper County,	Smith.
Eskimo Curlew,	Jasper County,	Savage.
Ruffed Grouse (1883),	Lawrence County,	Nehrling.
Lesser Prairie Hen (1887),	Lawrence County,	Lawrence.
Swallow-tailed Kite (1880),	Lawrence County,	Nehrling.
Swallow-tailed Kite,	Christian County,	Kastendieck.
Mississippi Kite,	Christian County,	Kastendieck.
Mississippi Kite,	Lawrence County,	Nehrling.
Krider's Hawk,	Christian County,	Kastendieck.
Western Red-tail (1888),	Christian County,	Kastendieck.
Harlan's Hawk (1905),	Christian County,	Kastendieck.
Richardson's Merlin,	Stone County,	Kastendieck.
Barn Owl (1882-1887),	Lawrence County,	Nehrling.
Long-eared Owl,	Greene County,	Kizer.
Long-eared Owl,	Christian County,	Kastendieck.
Snowy Owl,	Jasper County,	Smith.
Poor-will (1885),	Lawrence County,	Nehrling.
Poor-will,	Barry County,	Bush.
Arkansas Kingbird,	Lawrence County,	Nehrling.
Brewer's Blackbird (1885),	Lawrence County,	Nehrling.
Lapland Longspur,	Christian County,	Kastendieck.
Vesper Srarrow (1902),	Jasper County,	?

Vesper Sparrow (1902)	Lawrence County,	Nehrling.
Bachman's Sparrow (1884),	Lawrence County,	Nehrling.
Blue-headed Vireo (1902),	Jasper County,	Savage.
Bell's Vireo (1901),)	Jasper County,	Savage.
Golden-winged Warbler (1884),	Lawrence County,	Nehrling.
Cape May Warbler (1884),	Lawrence County,	Nehrling.
Black-throated Blue Warbler,	Lawrence County,	Nehrling.
Blackburnian Warbler (1884),	Lawrence County,	Nehrling.
Black-throated Green Warbler,	Lawrence County,	Nehrling.
Palm Warbler (1902),	Jasper County,	Savage.
Long-tailed Chickadee (1884),	Lawrence County,	Nehrling.
Carolina Chickadee,	Lawrence County,	Nehrling.
Willow Thrush,	Jasper County,	Savage.

The above list of thirty-seven species, many of which are not common, and some of which have not been reported since the days Nehrling spent in Pierce City, Lawrence County, in 1882-1887, leave to the observer of the present time a challenge and an objective to which to work. Many days pleasure and recreation may be spent upon them.

PIED-BILLED GREBE—*Podilymbus podiceps.*

A regular migrant. None have been known to breed here.

RED-THROATED LOON—*Gavia lumme.*

One bird was seen on a small lake in Stone County, May 2nd, 1920. It was observed by several people, and is authentic.

HERRING GULL—*Larus argentatus.*

A common spring and autumn migrant—mostly spring.

FRANKLIN'S GULL—*Larus franklini.*

A fairly common migrant across this section.

COMMON TERN—*Sterna hirundo.*

A somewhat rare migrant in my observations.

LEAST TERN—*Sterna antillarum.*

A somewhat rare migrant.

BLACK TERN—*Clidonias nigra surinamensis.*

Much the commonest of the family here. Seen every season.

DOUBLE-CRESTED CORMORANT—*Phalacrocorax auritus auritus.*

One bird was seen on Lake Taneycomo, Taney County, May 6th, 1922. It was perched on a limb of the "sunken forest." Was also observed by Prof. L. T. Reser of Ozark Wesleyan College, who is an experienced ornithologist.

WHITE PELICAN—*Pelecanus erythrorhynchos.*

It has never been the writer's privilege to see this bird here, but a flock was seen several times in the spring of 1921 while I was out of town, and two birds were killed this last spring some miles from Marionville, Lawrence County, and identified by townspeople who had seen the bird elsewhere.

MALLARD—*Anas platyrhynchos.*

All ducks are irregular visitants in the Ozarks. One never knows

where to find them, for some seasons they fail to appear in great numbers. The Mallard is by far the commonest species. I have seen it on Taneycomo in May, and in August.

BALDPATE—*Mareca americana.*

One lone bird is the entire list for this species. It was killed at Marionville, Missouri (Lawrence County), in 1919.

GREEN-WINGED TEAL—*Nettion carolinense.*

A common transient visitant.

BLUE-WINGED TEAL—*Querquedula discors.*

A fairly common migrant visitor.

SHOVELLER—*Spatula clypeata.*

A pair was wing-tipped on a pond here on our farm in 1910, but I have since lost my records from 1909 to 1912.

PINTAIL—*Dafila acuta tzitzihoa.*

A very common transient visitant here.

WOOD DUCK—*Aix sponsa.*

A rather uncommon migrant. I saw many flocks in the fall of 1909, and saw two killed in 1916 which bore Biological Survey bands Nos. 1950 and 1953.

SNOW GOOSE—*Chen hyperboreus nivalis.*

A fairly common migrant. I saw a large flock in the fall of 1922 with a huge Canada as flock leader.

CANADA GOOSE—*Branta canadensis canadensis.*

A fairly common transient. There is hardly enough water in most seasons to attract great numbers of water fowl.

HUTCHIN'S GOOSE—*Branta canadensis hutchinsi.*

A common migrant in fairly large numbers.

WHISTLING SWAN—*Cygnus columbianus.*

This species is recorded on the identification of John C. Melton of Cape Fair, Stone County, who saw a new bird on the James River in the fall of 1917. John is an old-time river man and is experienced as a hunter. He should know whereof he speaks, for he says that never before had he seen the bird.

BITTERN—*Botaurus lentiginosus.*

A common migrant, and a possible summer resident.

LEAST BITTERN—*Ixobrychus exilis.*

A common migrant, and an occasional summer resident. In past often seen during nesting season along the rivers.

GREAT BLUE HERON—*Ardea herodias herodias.*

A common migrant, and an occasional summer resident. In past years several rookeries were known along James River, but at present none nest there to my knowledge.

EGRET—*Casmerodius egretta.*

During the past six years this species has been increasingly common during migrations, and also seen along the James and White Rivers during the summer, although I have no knowledge as to any nearby nesting site.

LITTLE BLUE HERON—*Florida caerulea.*

A common summer resident somewhere in southwest Missouri, as the young birds in white plumage are a common sight in July and Au-

gust. I examined two in the summer of 1921 which had been killed and left on a gravel bar.

GREEN HERON—*Butorides virescens virescens.*

A common summer resident—the commonest of the family.

BLACK-CROWNED NIGHT HERON—*Nycticorax nycticorax nævius.*

One bird was seen in 1921 on the White River, Taney County.

SANDHILL CRANE—*Grus mexicana.*

The writer saw one of these birds soaring far above the river hills in Stone County in 1917, and one was killed in Lawrence County in 1920.

KING RAIL—*Rallus elegans.*

One bird of this species was killed here some years ago, and mounted by a local amateur taxidermist. I identified the bird, but have lost the date of collecting. It is a rather uncommon visitor.

VIRGINIA RAIL—*Rallus virginianus.*

I found a wing-tipped specimen of this species in about 1910, but that has been its only occurrence to my personal knowledge. I am sure that it is a common transient, however.

SORA—*Porzana carolina.*

The Sora is a common migrant. I have seen numerous specimens lately. I caught one by hand in May, 1923, and banded it before I allowed it to go free.

COOT—*Fulica americana.*

The Coot is a very common migrant.

WILSON'S PHALAROPE—*Steganopus tricolor.*

I found three of these birds feeding at a pond on May 2nd, 1920. Two were females in full plumage, so were easily identified. I hope to find it a fairly common migrant.

WOODCOCK—*Rubicola minor.*

The Woodcock is becoming more abundant. Never saw one in the state until October, 1922, and have seen two this spring within a few rods of my residence.

WILSON'S SNIPE—*Gallinago delicata.*

A common migrant, and an occasional winter resident, as it has been included in Christmas Census' several times.

LEAST SANDPIPER—*Pisobia minutilla.*

A fairly common migrant.

YELLOW-LEGS—*Totanus flavipes.*

A fairly common migrant; occasionally abundant.

WESTERN WILLET—*Catoptrophorus semipalmatus inornatus.*

I have seen one bird of this species for which I will vouch. It was seen in Stone County in 1920 (May 2nd).

SPOTTED SANDPIPER—*Actitis macularia.*

A fairly common summer resident along the streams.

KILLDEER—*Oxyechus vociferus.*

The Killdeer is a rather common migrant in this section.

SEMIPALMATED PLOVER—*Charadrius semipalmatus.*

A rather common migrant. Many flocks were seen during the spring flights of 1923.

BOB-WHITE—*Colinus virginianus virginianus.*

A very common, and increasingly abundant (in the past few years)

THE GAME REFUGE BILL

(Now Pending in Congress)

The Inland Bird Banding Association is about as far as any organization can be from intending any political activities, but when it comes to the protection of birds, it comes exactly in the line of our organization, as our purpose is not only the study but the protection of birds.

We have received from Mr. R. P. Holland a brief statement of the purpose of the Game Refuge Bill which will come before the present Congress. In this statement Mr. Holland gives, as briefly as possible, some idea of what the Bill is and how it will provide funds to give much better protection. Mr. Holland says:

"If migratory birds are to be perpetuated, they must be adequately protected. They must have places where they can nest, rest and feed in absolute security.

"Unwise drainage is rapidly squandering our heritage in lakes and marsh lands. The areas remaining which are suitable for such migratory birds as waterfowl and shore birds must be purchased now if they are to be preserved.

"Such marshes are public playgrounds for the men, women and children in the surrounding territory. They furnish a constant source of pleasure and profit to the scientific student of nature and recreation to the sportsmen at the proper season.

"To acquire this property will take an immense amount of money. Additional funds are needed now to furnish migratory birds, both game and insectivorous, the protection they must have. Where is the money to come from? The government can never be expected to appropriate it.

"The Game Refuge Bill now pending in Congress is the cureall. It will save our lakes and marshes for posterity as refuges and public playgrounds, furnish funds to care for the birds, and not cost the general taxpayer one cent. The sportsmen of America are only too willing to foot the bill by investing the ridiculously small sum of $1.00 per man for the privilege of hunting migratory birds. Write your Congressman today to vote for the Game Refuge Bill, known in Congress as the Anthony Bill."

A similar bill to this came before the last Congress and failed of passing, by a margin of very few votes, apparently not because of anything against it, except for purely political reasons. Mr. Holland knows what he is talking about for he is vice-president of the American Game Protective and Propagation Association (Woolworth Bldg., 233 Broadway, New York), and this Association represents the best opinions not only of ornithologists and those who are interested in the protection of birds, but also of the best sportsmanship in this country.

The passage of this Bill is very important not only to those interested in Bird Banding but to all who are interested in the protection of birds, and I therefore advise you to write to Mr. Holland and find out how the Congressmen in your state have voted on this matter and, if any have opposed it, write to the Congressman and find out *what is the matter with him*. The whole subject is a very pressing matter and deserves immediate attention to make sure that the Bill is passed at this session of Congress.

S. Prentiss Baldwin, President,
Inland Bird Banding Association.

resident of the section. Farmers are more and more giving protection to the quail.

WILD TURKEY—*Meleagrcis gallopavo silvestris.*

Ten years ago there were many wild turkeys in the tier of counties which are named in the second paragraph, but at the present date there are only a few remote districts where signs of wild turkeys may still be seen. Illegal killing by hunters and persecution by natural enemies have almost killed them out, to say nothing of the great amount of the Ozarks that is being cleared of timber and underbrush.

MOURNING DOVE—*Zenaidura macroura carolinensis.*

The Mourning Dove is a very common summer resident, and in mild seasons seems to stay about all winter.

TURKEY VULTURE—*Cathartes aura septentrionalis.*

A very common summer resident, and an occasional visitor during very mild spells in the winter season.

BLACK VULTURE—*Coragyps urubu urubu.*

A rather common summer resident, being almost if not totally as common as the Turkey Vulture.

MARSH HAWK—*Circus hudsonius.*

A common migrant, and seemingly an occasional summer resident in some sections of the Ozarks, for it is often seen.

SHARP-SHINNED HAWK—*Accipiter velox.*

A not uncommon migrant, and a rather rare summer resident.

COOPER'S HAWK—*Accipiter cooperi.*

A common summer resident, and not uncommon winter resident.

RED-TAILED HAWK—*Buteo borealis borealis.*

A common resident all over the Ozarks.

RED-SHOULDERED HAWK—*Buteo lineatus lineatus.*

Rather an uncommon resident, the majority of them having been seen here during mild winters.

ROUGH-LEGGED HAWK—*Archibuteo lagopus sancti-johannis.*

This species is a not rare winter resident and transient.

BALD EAGLE—*Haliæetus leucocephalus leucocephalus.*

The last Bald Eagle seen here was in 1919, when it soared about over the town of Marionville for about half an hour. There are still a very few of the birds in the most remote parts of the district.

SPARROW HAWK—*Cerchneis sparverius sparverius.*

A very abundant resident, and many nests are found every season in woodpecker holes in deadened timber far out of reach of man.

OSPREY—*Pandion haliaëtus carolinensis.*

Seen rather often along the streams of the Ozarks. Is possibly a summer resident and breeder in the timber of the bottoms.

SHORT-EARED OWL—*Asio flammeus.*

This species is a fairly common resident. It is often seen during the breeding season, and was collected several times in various winter seasons. It is hard to mistake when in action.

BARRED OWL—*Strix varia varia.*

A common resident of the more heavily wooded sections.

SCREECH OWL—*Otus asio asio.*

A very common resident over all the sections of the Ozarks.

GREAT HORNED OWL—*Bubo virginianus virginianus.*

A fairly common resident in the wooded sections.

YELLOW-BILLED CUCKOO—*Coccyzus americanus americanus.*

A common summer resident.

KINGFISHER—*Ceryle alcyon alcyon.*

Common summer resident, and not uncommon winter resident.

HAIRY WOODPECKER—*Dryobates villosus villosus.*

A fairly common resident; found throughout the year in the deeper woods.

DOWNY WOODPECKER—*Dryobates pubescens medianus.*

An abundant resident, worth many dollars to the fruit man of the region for his untiring work against larva-stage Codlin-moth during the winter seasons.

YELLOW-BELLIED SAPSUCKER—*Sphyrapicus varius varius.*

A not uncommon migrant, and a fairly common winter visitor.

NORTHERN PILEATED WOODPECKER—*Phlæotomus pileatus albieticola.*

We are fortunate enough to have this magnificant bird as a regular and fairly common breeder. I will long remember floating down James River, late one fall afternoon, and watching, at the level of the hills far above me in the evening sunlight, two old Pileated's lead their brood of five grown young across the wide valley.

RED-HEADED WOODPECKER—*Melanerpes erythrocephalus.*

An abundant summer resident and occasional winter visitor.

RED-BELLIED WOODPECKER—*Centurus carolinus.*

A fairly common resident.

NORTHERN FLICKER—*Colaptes auratus luteus.*

Common summer resident; also abundant in mild winters.

CHUCK-WILL'S-WIDOW—*Antrostomus carolinensis.*

More common in the wooded sections than the next species.

WHIP-POOR-WILL—*Antrosomus vociferus vociferus.*

A fairly common summer resident, but not abundant at any time.

NIGHTHAWK—*Chordeiles virginianus virginianus.*

An abundant summer resident.

CHIMNEY SWIFT—*Chætura pelagica.*

An abundant summer resident.

RUBY-THROATED HUMMINGBIRD—*Archilochus colubris.*

Common summer resident in all sections.

KINGBIRD—*Tyrannus tyrannus.*

A familiar bird to everyone, and very common.

CRESTED FLYCATCHER—*Myiarchus crinitus.*

Very common summer resident.

PHŒBE—*Sayornis phœbe.*

Common summer resident, and one was seen Christmas day, 1922.

WOOD PEWEE—*Myiochanes virens.*

A fairly common summer resident. It builds its nest in wild-plum thickets in the hollows and wooded thickets.

TRAILL'S FLYCATCHER—*Empidonax trailli trailli.*

A fairly common migrant. I believe it nests, but not sure.

LEAST FLYCATCHER—*Empidonax minimus.*

A fairly common visitant; not seen regularly.

PRAIRIE HORNED LARK—*Otocoris alpestris praticola.*

A common resident throughout the open part of the region.

BLUE JAY—*Cyanocitta cristata cristata.*

A common and mischievous resident.

CROW—*Corvus brachyrhynchos brachyrhynchos.*

A very abundant resident. It spends the winters in huge flocks, which sometimes become so large and destructive that they must be thinned out. These flocks are immense. I once drove fourteen miles, during which time I was never out of sight of great numbers of the crows returning to the roost, and at the time I left the roost to start on the fourteen-mile drive home there were already many crows at the nest. For the sake of temperance I have estimated the flock at 10,000 at that time. I believe there were more.

BOBOLINK—*Dolichonyx oryzivorus.*

A rather uncommon migrant, but seen almost every season.

COWBIRD—*Molothrus ater ater.*

A summer resident, many times too numerous to suit the author.

YELLOW-HEADED BLACKBIRD—*Xanthocephalus xanthocephalus.*

Not a common migrant, but occasionally seen. More were seen during the spring of 1920 than at all other times combined.

RED-WINGED BLACKBIRD—*Agelaius phœniceus.*

An abundant migrant, a common summer resident in the marshes, and a very uncommon winter resident. No studies have been made at this point to determine the subspecies present.

MEADOWLARK—*Sturnella magna magna.*

A rare winter resident, but an abundant summer resident.

ORCHARD ORIOLE—*Icterus spurius.*

An abundant summer resident.

BALTIMORE ORIOLE—*Icterus galbula.*

A rather uncommon migrant; not seen during every migration.

RUSTY BLACKBIRD—*Euphagus carolinus.*

Rather uncommon, only a few specimens having been seen.

BRONZED GRACKLE—*Quiscalus quiscula æneus.*

A common summer resident.

PURPLE FINCH—*Carpodacus purpureus purpureus.*

Not very common either as a migrant or winter resident.

GOLDFINCH—*Astragalinus tristis tristis.*

A common summer resident, and occasional winter resident.

ENGLISH SPARROW—*Passer domesticus.*

While the zenith of its abundance is said to have been reached in the cities already, it has not come in the country, as it is still on the increase. It nests in the wildest parts of the Ozarks in trees and posts, and seems to know no limits.

GRASSHOPPER SPARROW—*Ammodramus savannarum australis.*

A common migrant here. It has not been possible for the writer to make a detailed study of the smaller sparrows here, and the present list is sadly lacking in that regard.

LECONTE'S SPARROW—*Passerherbulus lecontei.*

A common migrant.

LARK SPARROW—*Chondestes grammacus grammacus.*

A common summer resident, and well known.

HARRIS'S SPARROW—*Zonotrichia querula.*

Formerly a very common migrant and winter resident, but in the last few years not nearly so common as before.

WHITE-CROWNED SPARROW—*Zonotrichia leucophrys.*

A common migrant and winter resident.

WHITE-THROATED SPARROW—*Zonotrichia albicollis.*

A very common migrant and winter resident.

TREE SPARROW—*Spizella monticola monticola.*

A fairly common winter resident in mild winters; more common in severe winters.

CHIPPING SPARROW—*Spizella passerina passerina.*

A very abundant summer resident.

FIELD SPARROW—*Spizella pusilla pusilla.*

A common summer resident, and occasional winter resident.

SLATE-COLORED JUNCO—*Junco hyemalis hyemalis.*

An abundant winter resident. As with other species I have not had opportunity to make a study for subspecies.

SONG SPARROW—*Melospiza melodia melodia.*

A common migrant and fairly common winter resident.

LINCOLN'S SPARROW—*Melospiza lincolni lincolni.*

A common migrant, and occasional winter resident.

SWAMP SPARROW—*Melospiza georgiana.*

A fairly common winter resident and migrant.

FOX SPARROW—*Passerella iliaca iliaca.*

A not uncommon winter resident, but not so common in late years as formerly.

TOWHEE—*Pipilo erythrophthalmus erythrophthalmus.*

Common summer resident, and occasional winter visitor.

CARDINAL—*Cardinalis cardinalis cardinalis.*

Abundant resident in all sections.

ROSE-BREASTED GROSBEAK—*Hedymeles ludovicianus.*

A fairly common migrant.

BLUE GROSBEAK—*Guiraca cærulea cærulea.*

A common, fairly abundant summer resident in brush-covered pastures and hillsides.

INDIGO BUNTING—*Passerina cyanea.*

A very common summer resident.

DICKCISSEL—*Spiza americana.*

Abundant summer resident.

SCARLET TANAGER—*Piranga erythromelas.*

A common summer resident.

SUMMER TANAGER—*Piranga rubra rubra.*

Very common summer resident.

PURPLE MARTIN—*Progne subis subis.*

No farmhouse is found without a few pairs of martins in some sort of bird box.

BARN SWALLOW—*Hirundo erythrogastra.*

A common summer resident. A few breed in every community.

TREE SWALLOW—*Iridoprocne bicolor.*

A common migrant. Have seen it during the breeding season, but not commonly, and do not know where it nests.

BANK SWALLOW—*Riparia riparia.*

A fairly common summer resident. The river banks are too small to attract them in great numbers, as they do the next species.

ROUGH-WINGED SWALLOW—*Stelgidopteryx serripennis.*

A very common summer resident along the streams.

CEDAR WAXWING—*Bombycilla cedorum.*

An irregular but not uncommon migrant at all seasons of year.

MIGRANT SHRIKE—*Lanius ludovicianus migrans.*

A common resident, nesting commonly in the region.

RED-EYED VIREO—*Vireosylva olivacea.*

A common summer resident in all wooded sections.

YELLOW-THROATED VIREO—*Lanivireo flavifrons.*

A fairly common summer resident along the smaller streams in the wooded districts.

BLACK AND WHITE WARBLER—*Mniotilta varia.*

A common migrant, and rather uncommon summer resident in the wilder sections.

PROTHONOTARY WARBLER—*Protonotaria citrea.*

A fairly common summer resident in the heavier bottom woods.

SWAINSON'S WARBLER—*Limniothlypis swainsonii.*

I found Swainson's Warbler present in Lawrence County, Missouri, in May, 1917, and again in July of the same year in Stone County.

WORM-EATING WARBLER—*Helmitheros vermivorus.*

A not uncommon summer resident along the creek bottoms.

BLUE-WINGED WARBLER—*Vermivora pinus.*

Not uncommon, but was found breeding along the James River in 1917 by the author.

ORANGE-CROWNED WARBLER—*Vermivora celata celata.*

A fairly common migrant along the wooded creeks.

NORTHERN PARULA WARBLER—*Compsothlypis americana pusilla.*

An abundant migrant, and found breeding along the heavily wooded creek bottoms.

YELLOW WARBLER—*Dendroica æstiva æstiva.*

A common summer resident throughout the Ozark region.

MYRTLE WARBLER—*Dendroica coronata.*

A common migrant.

MAGNOLIA WARBLER—*Dendroica magnolia.*

A fairly common migrant visitor.

SYCAMORE WARBLER—*Dendroica dominica albilora.*

A rather uncommon summer resident, and a more common migrant.

PRAIRIE WARBLER—*Dendroica discolor.*

A common summer resident of the Ozark and Ozark border region.

OVEN-BIRD—*Seiurus aurocapillus.*

A fairly common migrant, and an occasional breeder in the less civilized sections.

GRINNEL'S WATER-THRUSH—*Seiurus noveboracensis notabilis.*

A fairly common migrant in the spring.

LOUISIANA WATER-THRUSH—*Seiurus motacilla.*

A common summer resident along the streams of the Ozarks.

KENTUCKY WARBLER—*Oporornis formosus.*

A common summer resident of the river districts.

MOURNING WARBLER—*Oporornis philadelphia.*

A casual migratory visitor, not at all common.

MARYLAND YELLOW-THROAT—*Geothlypis trichas trichas.*

An abundant summer resident.

YELLOW-BREASTED CHAT—*Icteria virens virens.*

A common summer resident, and well known to even the uninitiated who call them "Yellow Mockingbirds" in some sections.

HOODED WARBLER—*Wilsonia citrina.*

A not uncommon summer resident, and common migrant.

CANADA WARBLER—*Wilsonia canadensis.*

One specimen was seen here in the spring of 1920.

REDSTART—*Setophaga ruticilla.*

A common summer resident in the river valleys.

PIPIT—*Anthus rubescens.*

A fairly common migrant, but not regularly seen.

MOCKINGBIRD—*Mimus polyglottos polyglottos.*

An occasional winter resident, and a very common summer resident throughout the Ozark region.

CATBIRD—*Dumetella carolinensis.*

An abundant summer resident.

BROWN THRASHER—*Toxostoma rufum.*

An extra-abundant summer resident.

CAROLINA WREN—*Thryothorus ludovicianus ludovicianus.*

Commonly found resident throughout the region.

BEWICK WREN—*Thryomanes bewicki bewicki.*

This representative of the wren family entirely replaces the House Wren in this part of the state. It is a very abundant summer resident, and occasionally stays over the milder winters.

HOUSE WREN—*Troglodytes aëdon aëdon.*

The House Wren is a common migrant through this section, but is rarely found resident here.

WINTER WREN—*Nannus hiemalis hiemalis.*

Is a very friendly and unmistakable visitor during our winters, and especially so if the winter be severe.

PRAIRIE MARSH WREN—*Telmatodytes plaustris iliacus.*

A not uncommon summer resident in the lowland section along creek bottoms.

BROWN CREEPER—*Certhia familiaris americana.*

A very common winter visitant and migrant, frequenting all wooded sections.

WHITE-BREASTED NUTHATCH—*Sitta carolinensis.*

A fairly common resident, breeding along the larger rivers in the deeper woodlands, where observation is difficult.

TUFTED TITMOUSE—*Bæolophus bicolor.*

A very abundant resident all over the Ozarks.

CHICKADEE—*Penthestes atricapillus atricapillus.*

Like its relative, the Tit, it is very common and well distributed.

GOLDEN-CROWNED KINGLET—*Regulus satrapa satrapa.*

A fairly common transient visitor.

RUBY-CROWNED KINGLET—*Regulus calendula calendula.*

A common migrant, and occasional winter resident in mild seasons.

BLUE-GRAY GNATCATCHER—*Polioptilla cærulea cærulea.*

A common, fairly abundant, summer resident all throughout the Ozark section. I never take a trip to the rivers without seeing a few pairs of them. The nests have been observed in Newton County.

WOOD THRUSH—*Hylocichla mustelina.*

An increasingly common summer resident. I have seen more of them during this 1923 season than ever before.

OLIVE-BACKED THRUSH—*Hylocichla ustulata swainsoni.*

A very common and regular migrant through our territory.

ROBIN—*Planesticus migratorius migratorius.*

A very abundant migrant, an abundant summer resident, and a regular winter resident in small numbers.

BLUEBIRD—*Sialia sialis sialis.*

An exceedingly common summer resident, and a winter resident in numbers varying with the severity of the winters.

ADDENDA

SWAINSON'S HAWK—*Buteo swainsoni.*

A rare migrant, and a very rare breeder. A very occasional one is seen during the nesting season.

ACADIAN FLYCATCHER—*Empidonax virescens.*

A fairly common summer resident in thickly wooded regions.

WHITE-EYED VIREO—*Vireo griseus griseus.*

A common summer resident, nesting in brushy ravines and pastures.

TENNESSEE WARBLER—*Vermivora peregrina.*

An abundant migrant, flooding the woods every migration.

IDENTIFYING BIRDS AFIELD

By A. F. Ganier

On going afield with an experienced observer of birds the beginner is usually surprised as well as puzzled at the readiness with which the various species are discerned, identified and pointed out for his further study. Frequently it is little more than a fleeting glimpse near at hand, or a bird in the distance, whose song, call note or color cannot be had, yet an almost intangible bit or chain of evidence proclaimed to the keen and experienced observer the identity of the species in question. Broadly speaking this method of identifying birds afield may be termed a "process of elimination" and fitness to accurately apply such a process can only be attained after careful study and long and close observation. More time given to studiously watching birds when found and less toward building up big daily lists is the means by which this knowledge may be had. There are many enthusiastic students of bird life who, after years of work in the open, are still dependent upon note or song or upon a reasonably close view of the coloration of plumage before they are at all sure of their bird. In fact so much has been said and written of color keys and field glasses that the tyro might readily believe that little else may avail in his efforts to identify. It is therefore the purpose of this paper to maintain that no less a factor is knowledge of the fact that each species of birds have pronounced characteristics, mannerisms, habits and habitats which may be learned as certainly as color and song and used as a convenient method of identification on trips afield. I have a good friend whose ear is so keen, and so well attuned by practice, that he has only to hear the faintest note or muttering of some bird to be able to name it.

I have other friends who have their color keys so clearly charted in their minds that with a bit of study as to color and size they feel safe in naming their bird. But what of the occasions when glasses are not at hand or when the light is poor, and what of the birds that are silent or out of earshot. My own plan is to rely much less on color and song than upon mannerisms, feeding habits and habitat, and thus while my friend with glasses is trying for a view as to color, I have passed on and perhaps recorded a dozen more that would else have flown away and thus escaped my record.

So varied are these characteristics that a few will be cited here, such as position of body and tail in flight, method of wing stroke, manner of alighting, position of body after alighting, location chosen in tree or shrub for alighting, conduct of the bird after it has alit, method of hopping, walking or scratching, uneasiness or the reverse, position of birds while feeding on branches or fly-catching in mid-air, method of flocking or appearing singly or scattered, shape assumed by flocks, special mannerisms during period of courtship, etc., etc.

As illustrations for some of the points enumerated, let us take some of the birds of prey. Those familiar with both the Black and Turkey Vultures can readily identify them at a distance of a mile by watching for a few moments the time and method of wing beat. Aside from this the Turkey Vulture is usually found close to the ground seeking its food, while the Black species more often soars at a great height where he can keep a dozen Turkey Vultures under surveilance and thus rob the first one of them that locates food. Passing to the hawks, we know of the characteristic soaring habits of the Redtail and the Broad-wing and contrast with them the rapid, low, direct flight of the Coopers and the Sharp-shinned. Those who have watched the Sparrow Hawk hover in mid air over a hay field need only to remember this characteristic to separate it from the Sharp-shinned and the Pigeon Hawk and if another long range characteristic is required it will be found that the Sparrow Hawk chooses for its perch a site that would rarely or never be chosen by the other two small species. And again, with reference to the latter, there are field characteristics just as pronounced between the Sharp-shinned and Pigeon Hawk.

Taking up next an ever puzzling family for the amateur, the sparrows, the study of their habits and habitat will be found to be the most accurate as well as the most rapid method of listing these dull colored little birds. Let us take for instance the White-crowned and White-throated Sparrows. The former when startled will work its way upward to the top of some shrub in the thicket and there eye the intruder with body poised upright and crest erected, the very personification of the wild Canadian country in which he is reared. His cousin, the Whitethroat, is sociable and good natured, showing no great fear and only a desire to slouch along with his fellows and to move on, feeding unconcernedly as he does so. Tho greatly as these two

sparrows differ in their dispositions, specimens examined together in the hand show that in size and markings they differ but slightly. Taking two more species of about the same size, we will consider the Field and Chipping Sparrows. Aside from the longer tail and lighter color of the former, one must, at a distance rely upon their movements for their identity. It will be found that the Chipping Sparrow feeds in the trees, shrubs and upon the bare ground or close-cropped grass, while the Field Sparrow chooses the weeds, briars and ground covered with long grass. He is a bird of the brush while the Chipping is a bird of the open; aside from habitat the two may be distinguished from each other by their manner of flight and other characteristics. And so in turn might I take up each member of the sparrow family and recite how each has one or more characteristics not shared by its cousins and which are quite as infallible, or more so, than field observation of color or song. In no closely allied family are mannerisms as distinct as among the woodpecktrs. Mere coloration, size and call notes facilitate identification but close observations will reveal that each species has its own distinct manner of going about its climbing, pecking, prying, hammering, flying and feeding. Take for instance the Sapsucker, which clings close to an upright limb and keeps the better part of a stout one between himself and the observer, as tho he expected to be shot at for his sapsucking proclivities. Then take the Downy or the Red-bellied woodpeckers, which, apparently knowing the good they do, have none of sneak about them and trustingly show themselves in full, making a clatter about it all the while. That splendid member of the woodpecker family, the Pileated, has an individuality and nobility about him that commands wonder and respect. When one has won the confidence of one of these birds its gentleness is surprising and the dignity of its bearing begets for it both respect and interest.

The great warbler family is no exception to the law of varied field characteristics and aside from colors and markings, all of the items which I have mentioned may be brought to bear to bring about a process of elimination, and so come quickly to proper identification. I confess, that with this family, I have not fully mastered the process which I have outlined but knowing that my friend with keen ear has mentioned 57 varieties of thin, weak warbler chips, I have little doubt that their mannerisms will be found to differ in a pronounced way.

Passing on to a few scattering examples which are probably well known to most observers, I will recall to your mind how the shrike flies its low level flight and then at the end rises abruptly to a point of vantage, how the Palm Warbler identifies itself by nervously twitching its tail, how the Water-Thrushes make their identity easy by bobbing up and down, how certain ducks dive while others only feed in shallow water, how the Chat, and also the Yellow-throat, may be identified at a distance when he mounts high in air and then falls pell mell to earth again; how the Nighthawk is at home on the wing while his near cousin, the Whip-poor-will, prefers to rest on a woodland bough; how the Grey-cheeked Thrush will allow close approach while his very near cousin, the Olive-backed, is as wild and as wary as a Great Horned Owl, and so on. I might cite many more well known examples with which you are familiar.

Summing it all up, one will find that the most interesting of all methods of identifying birds is that which involves not chiefly the color and song but the actions, habits, habitat, and other characteristics of the various species, and in arriving at a working knowledge of this method the observer opens to himself a new angle and wide field of bird study which will afford him interest unending.

Nashville, Tenn., November 2, 1923.

THE WILSON BULLETIN

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Price in the United States, Canada and Mexico, $1 50 a year, 50c a number, post paid. Price in all countries in the International Union, $2.00 a year, 60c a number. Subscriptions should be sent to Wm. I. Lyon, 124 Washington Street, Waukegan, Ill.

EDITORIAL

Our Annual Meeting is our only means of forming personal acquaintances that are so essential for the success of our organization. It affords the best means of getting in touch with the work that others are doing in the same field. It is a stimulus to both personal effort and coöperation in all lines of study. Your editor has enjoyed a continuous personal relationship with the organization during the thirty-five years of its history, and in that time most of his most valued friendships have been formed at the meetings. He therefore urges you, as a member, or as a reader, to make your plans to attend the Cincinnati meeting this year. You will find it very well worth while experience.

Bird Banding has come to occupy the forefront in aggressive work in bird study, partly because it is a new thing as it has developed under the leadership of Mr. Baldwin and those associated with him in trapping and banding. It is a field of endeavor that holds out enticements in the line of discoveries concerning bird movements of all sorts, individual traits, nesting habits, to mention but a few things. It may well point the way to intensive studies of individual birds in their perfect freedom of life. The writer is a firm believer in the value of intensive study of individual birds, such as that pursued with so much of great value by Miss Althea R. Sherman. There was so much of value in the intimate studies of the feeding of nestlings that it is a great pity that no more seems to be in progress. Much of the detail of such study might be omitted if the task seem too great, but as a method of study it is too valuable to be abandoned. We hope that the keen interest that is being manifested in banding operations may spill over into the general field of bird watching.

FIELD NOTES

LOGGERHEAD SHRIKE EATS ENGLISH SPARROW

At Zephyr Hills, Florida, on June 11, 1923, I discovered a Loggerhead Shrike carrying in its claws, not its beak, what appeared to be a song bird. This Shrike flew to a tree in which were an adult bird, and three young ones clamoring for food. All gathered around the booty and feasted for some time. After a few minutes the dead bird fell to the ground, allowing opportunity for examination. It proved to be an English Sparrow, either female or immature, the head entirely gone and the body more or less torn. It was evidently freshly killed. As soon as we left the spot one of the adult birds came to the ground and carried the remains of the sparrow away.

This is the first evidence I have received of the Loggerhead Shrike eating other birds. It is fairly common around Macon, Ga., but I have never had the slightest evidence myself, nor have a number of other observers, with whom I have talked of its killing song birds. In this part of Florida the Loggerhead is abundant, but my brother-in-law, who has studied birds here for four years, has never before known of its eating other birds. This would therefore seem to be a rare occurence.

Macon, Ga. BERYL T. MOUNTS.

PECULIAR NESTING HABITS OF SOME BIRDS

Having made a few observations that may be of general interest, upon the nesting peculiarities of some species of birds, I will here relate them:

As I was at work on one of my Bird Census lists I noticed a pair of Phœbes about a private bridge over a small creek in the field. Of course that was perfectly natural and just what one would expect. But it soon became apparent that there were more than two adult birds around there; in fact, I soon noticed four of them at once. Close investigation showed only one nest situated under the bridge. I was puzzled. However, there was an old deserted well close by the bridge and this well had a fence about ten feet square around it. I noticed one of the birds alighted frequently on one of the posts of this fence. One of the planks was off the top platform of the well, leaving an open space about twelve inches wide across the center of the well. I went up to the well to investigate, and one of the birds flew out of the well. A careful examination showed that the well was "curbed" up with boards, not round, but four feet square on the inside. It was sixteen feet from the platform down to the water, and a frame of 2x4 inch lumber was inside the boards and five feet below the platform. There was no other frame or projection of any kind inside the curbing, nothing but smooth boards down to the water. In the northwest corner upon the edge of the 2x4 frame above referred to was the bird's nest with five snow white eggs in it. A twelve-inch opening five feet above and cold water ten feet below! Now this was certainly an interesting situation for a bird's nest! I resolved then and there that this affair would bear watching. I went back in three days and the young birds (4 of them) were hatched out. They

grew as young birds do, unmindful of their precarious situation. About two weeks passed. I saw them several times during this time. The last time I saw them they were about fully feathered out, three were on the nest and one was on the 2x4 beside the nest. A few days later, when I went there, the birds, neither young nor old, were to be seen anywhere. I examined the surface of the water very carefully but could see no sign of a drowned bird. They must have made their initial flight up and out through that twelve-inch opening. It seems marvelous that a bird with no opportunities for practice should be able to do this, but the facts seem to indicate that they did, for if they had failed and dropped into the water below, their bodies would have been floating on its surface. There certainly is a vast difference between the various species in this respect. Imagine a young House Wren, Robin, or Rose-breasted Grosbeak leaving the nest under these circumstances.

Other and similar cases, with the danger of drowning eliminated, however, are the Chimney Swifts. I have at least one instance on record where a pair of these birds had their nest in a chimney 8x8 inches inside measurement and situated twenty-two feet below the top of chimney. How the young birds can make a flight of twenty-two feet straight up to get into daylight is also a wonder to me. But perhaps they crawl up the wall with the assistance of their feet and wings as do the young Wrens.

E. D. Nauman.

Sigourney, Iowa.

NOTES=HERE AND THERE

Conducted by the Secretary

The Annual Meeting

All the attention of the Secretary is now bent on the annual meeting of the Wilson Ornithological Club, which will be held in Cincinnati, Ohio, in conjunction with the American Association for the Advancement of Science, with which it is affiliated, on Monday, December 31, and Tuesday, January 1. The forenoon program on Monday will be held with The Ecological Society of America, several of whose important members are also members of the Wilson Club. The papers and discussions given at this program will bear on the relations of Ornithology and Ecology. The afternoon session will be taken up with papers on various phases of ornithology, titles of which are coming in rapidly now. Tuesday morning will be devoted to Bird Banding, with our Treasurer, Mr. William I. Lyon, in charge. He has promised some interesting and valuable contributions. Since he is Secretary of the Inland Bird-Banding Association, he can secure the help of many of the prominent members of that excellent organization. Tuesday afternoon will be devoted to additional papers and discussions on matters of interest to members of our club.

The sessions and the places of meeting have been arranged as follows:

Monday, December 31, 9:00 A. M.—Hanna Annex No. 18.
Monday, December 31, 1:00 P. M.—MacMicken Hall No. 3.
Tuesday, January 1, 8:30 A. M.—McMicken Hall No. 3.
Tuesday, January 1, 1:00 P. M.—McMicken Hall No. 3.

Hotel Gibson has been designated as the headquarters of the W. O. C. Reservations should be made in advance, either at the headquarters hotel or in some other good hotel. The many people attracted by the A. A. A. S. meetings will necessitate this, if one desires to be saved unnecessary trouble. Mr. Edgar Dow Gilman of the University of Cincinnati, has been chosen as the local representative of the A. A. A. S., to whom inquiries should be sent relative to phases of the general program. He does not, however, make reservations for rooms.

Begin now to plan for a trip to Cincinnati as a part of the holiday season this year.

A folder called Bird Leaflet No. 1 has just been issued by the Carnegie Museum of Pittsburgh, the material having been prepared by our good friend and member, George M. Sutton. The front page has an excellent photograph of the Family Group of the Red-shouldered Hawk in the Carnegie Museum. The folder is a plea for bird students to learn and protect the birds.

The New England Bird Banding Association is planning a very unusual course in the study of birds. Dr. Glover M. Allen, President of the Nuttall Ornithological Club, will give a series of ten lectures on the Elements of Ornithology. Though these lectures will be given in Boston, provision has been made to have the lectures in printed form sent

out to any one desiring them, a small fee being charged for the course. An additional lecture on Bird Banding will be given by Professor Alfred O. Gross of Bowdoin College. This is a worthy movement and deserves the hearty coöperation of all well-wishers of ornithology and its allied sciences.

The Yearbook of the Public Museum of the City of Milwaukee for the year 1922 is a credit to any group of scientists. There are found in its pages records of all sorts of investigations by members of the staff, ranging from totem poles to fossils. Articles which are especially interesting to ornithologists are the following: A Collecting Expedition to Bonaventure Island, by George Shosbree; Notes on a Side Trip to the Gaspe Cormorant Colonies, by H. L. Stoddard; Collecting for the New School Loan Groups, by Owen J. Gromme; "Stuffed Birds," by H. L. Stoddard; and the European Starling in Milwaukee, by H. L. Stoddard. Messrs. Stoddard and Shosbree are members of the W. O. C., active, vigorous ones, too. R. S. Corwin, another one of our members on the Museum staff, contributes an article to the Yearbook entitled The "Use" in Museum.

Mr. Edward von Siebold Dingle, Assistant Ornithologist in the Charleston, South Carolina, Museum, and one of our members, has attained a wide reputation as a painter of bird life, especially Southern birds. In April, 1923, an exhibition of his pictures was given at the Convention of American Museums.

The Inland Bird-Banding Association, so closely related to the W. O. C. because of the numerous members who belong to both organizations, is doing a new and original piece of work. I am sure all of our members who attend the meeting at Cincinnati will want to hear the part of the program—Tuesday morning—devoted to bird-banding.

The Century Company has recently published a delightful book called The Importance of Bird Life, by George Inness Hartley, Research Associate of British Guiana Zoölogical Expedition. Mr. Hartley, it will be remembered, is the author of Boy Hunters in Demerara.

One of the "catchiest" appeals to the ornithologist which have come to the Secretary's desk recently is a reprint from the April Bulletin of the Massachusetts Audubon Society, The Gentle Sport of Bird-Banding, by Helen Granger Whittle.

The writer of items in this department is always glad to find something of interest about our members. It is a real joy, then, for him to acknowledge the receipt of an excellent bound volume from one of our newest members, Mr. I. H. Johnston, state ornithologist of West Virginia, the volume being entitled "Birds of West Virginia." It contains thirty or forty colored plates from the drawings of Louis Agassiz Fuertes, with an elaborate description of the bird, its habits, its economic value, and its aesthetic qualities. There are articles on ways to attract birds, on bird-gardening, bird-banding, and other interesting phases of practical ornithology. The bulletin combines the scientific and the popular in a very unique way, and forms a book which should be used ex-

tensively in the schools and homes of that state, in addition to furnishing a model for other states planning a similar state publication.

Professor Edward Drane Crabb, formerly Curator of the museum of the University of Oklahoma, and now Associate Lecturer of the Milwaukee Public Museum, issued, just before leaving the University of Oklahoma, a bulletin entitled A Handbook on Preserving Museum Specimens in the Field. It contains some very practical suggestions for campers, with additional chapters on the preservation of game heads, large mammals, small mammals, skeletons, birds, collecting bird eggs and nests, preparing fish and reptiles, preparing insects, shells of various kinds, fossils, alcoholics, and tanning. It is a comprehensive handbook for all types of collectors, as the headings above will show, and will prove of great value to amateur and professional alike.

The University of Iowa devoted its Service Bulletin of September 8, 1923, to The Migration of Birds, with a brief discussion of Bird-Banding. Though the bulletin is unsigned, it bears the ear-marks of our Vice-President, Professor Dayton Stoner, the head of the Department of Zoölogy of that university. The bulletin is a wise suggestion to other schools and colleges in advertising their practical interest in problems of an economic or aesthetic nature.

The American Ornithologists' Union held its Forty-sixth Stated Meeting in the halls of the Museum of Comparative Zoölogy in Cambridge, Massachusetts, October 9-11, 1923. It will be remembered that the W. O. C. held its 1922 session jointly with the A. O. U. at Chicago. Further notes on the meetings at Cambridge will appear elsewhere in this issue.

Mr. Eugene Swope, Mount Healthy, Cincinnati, Ohio, until recently field agent for Ohio for the National Association of Audubon Societies, will go to Oyster Bay, Long Island, about the first of 1924 to develop the Roosevelt Bird Sanctuary. We wish him joy in his new work, but we hate to lose his presence and aid here in the Middle West.

The Tennessee Ornithological Society, of which Albert F. Ganier, our former Secretary, is President, took their annual field-list on Sunday, October 23, along South Harpeth River, in Cheatham County, Tennessee. This has become an annual event of great importance to the Tennessee bird lovers.

Professor T. C. Stephens of Morningside College, Sioux City, Iowa, and a member of the Editorial Staff of the Wilson Bulletin, spent two weeks the past summer at McGregor, Iowa, as a member of the lecture staff of the Wild Life Conference. Earlier in the summer, in company with Mr. W. W. Bennett, he made an auto trip to northern Minnesota for the purpose of studying bird life in that region. His especial work was to make photographs of the scenery and habitats of the birds. Mr. Bennettt worked in color photography, using the Paget process. He secured some excellent color pictures of different warblers on their nests. The two naturalists camped on the shore of Little Mantrap Lake, just outside the boundaries of Itasca State Park. During their trip of 1000 miles they made 300 photographic exposures.

In late August Professor Stephens made another trip into Minnesota and North Dakota: to Grand Forks, Devil's Lake, Bemidji, the bird refuge at Stump Lake, and Itasca State Park, covering 1800 miles in an automobile and adding 200 more photographs to his collection.

In making up the membership-list for the September Bulletin some unavoidable mistakes were made. The Secretary has appreciated the fact that his attention has been called to some of these mistakes. Errors were made in the case of the following, which have been reported:

Sustaining Member—Weir R. Mills, Pierson, Iowa (name omitted).

H. B. Bailey, Box 112, Newport News, Virginia (name omitted).

Miss Althea Sherman, National, via McGregor, Iowa (address wrong).

Sustaining Member—F. M. Woodruff, Lincoln Park, Chicago (name omitted).

Active Member—Amos W. Butler, 52 Downey Avenue, Indianapolis, Indiana (name omitted).

Active Member—R. M. Strong, 706 S. Lincoln Street, Chicago (name omitted).

Miss Adah M. Hood, 1002 Ninth Street, Sioux City, Iowa (name omitted).

If any other errors are found in the list, the Secretary would deeply appreciate having his attention called to them.

BIRD BANDING DEPARTMENT

Under the Direction of Wm. I. Lyon, Waukegan, Ill.

BIRD BANDING ACTIVITIES AT THE FORTY-FIRST STATED MEETING OF THE AMERICAN ORNITHOLOGISTS' UNION AT CAMBRIDGE, MASS.

On Tuesday afternoon, October 9th, T. E. Musselman gave his experience at Mr. S. Prentiss Baldwin's trapping station at Thomasville, Ga., showing many slides of the interesting phases that develop in handling large quantities of birds in a short time. The large number of returns of the Chipping Sparrows seems to prove Thomasville, Ga., to be their main winter quarters. Observations showed that they were subjected to a peculiar foot disease and a special investigation was started to discover the cause and possible way of elimination.

The constant returns, from year to year, of a little group of White-throated Sparrows, that occupy the same patch of shrubbery each year, and are seldom trapped elsewhere, seems to prove how close they remain in their winter quarters. Many slides showed that, by quiet methods, birds would remain in the hands to have their photos taken. One, that brought applause from the audience, was a Mourning Dove sitting on a little girl's shoulder. Cardinals showed their ability to fight, in a number of slides.

There was a conference in Mr. Baldwin's parlors at the Hotel Lenox, in Boston, on Tuesday evening. Those present were W. C. Henderson, Assistant Chief, Dr. H. C. Oberholser and F. C. Lincoln of the Biological Survey, Hoyes Lloyd, Supervisor, and P. A. Taverner of the Wild Life Protection Department of Canada, and L. B. Fletcher, Secretary, Charles L. Whittle, Councilor, and Charles B. Floyd, Treasurer of the New England Bird Banding Association, Rudyerd Boulton, Secretary of the Eastern Bird Banding Association, S. Prentiss Baldwin, President, and Wm. I. Lyon, Secretary of the Inland Bird Banding Association.

The main purpose of the conference was the discussion of the territory which should be included in each regional association; maps of Canada and the United States were gone over, and carefully marked, and an agreement reached as to the territory to be included; and an outline map will soon be published by the survey showing these lines. After this subject was determined the methods of obtaining members and general promotion of Bird Banding furnished much interesting and pleasant discussion during the evening.

Wednesday morning, October 10th, was the Bird Banding session. "Notes on a Scranton Starling Roost" by R. N. Davis, Scranton, Pa., illustrated, came first and ran overtime.

"Trapping Devices for Bird Banding," illustrated by lantern slides, by Henry E. Childs, East Providence, R. I. Mr. Childs had a paper Tuesday afternoon on the "Effect of Cultivation upon Changing Bird Population," which covered the same grounds where he carried on his trapping and banding and was assisted by Boy Scouts and High School Biology classes. The first trap shown was a clever tree trap, using a

mouse trap for trigger spring, and it produced good results. A large drop trap also produced good results; a nest trap was used and, in some cases, a nestling bird was used as a call bird or decoy.

"Some Bird Banding Experiences" by B. S. Bowdish, Demarest, N. J. The paper showed that he was a veteran Bird Bander, with a total of bands placed at 1700. A number of returns were secured with Song Sparrows; also Tree Sparrows. Two Purple Finches banded at the Bowdish Station were taken by another bander at Fairfield, Conn. A clever scheme explained how to use a live bird in a glass jar to decoy a troublesome Sparrow Hawk. One hundred forty-four Purple Finches were handled and the first color in young birds was observed in head and neck. Also stated that Mrs. Whittle has observed first color in rump. Mr. Bowdish moved about one mile away and one Purple Finch repeated at his new station.

"Midsummer Song Sparrows, A Statistical Study of Banding Data" by John T. Nichols and Rudyerd Boulton, New York, gave results of trapping and banding in charts of percentage and comparison.

"The Migration of the Mallard (as shown by banding data)," illustrated by lantern slides, by Frederick C. Lincoln, Washington, D. C. Mr. Lincoln's work in banding ducks in the marshes, along the Illinois River, showed that, with the proper equipment and location, ducks are as easily banded as small birds, having banded 190 ducks in one day, and having taken 100 ducks in one trap as a record for one catch. He showed a large net trap which, if properly worked during a season, would give one chances for half a million ducks. He stated that there had been about 4,000 Mallards banded up to the present time.

"Experiences in Bird Banding," illustrated by lantern slides, by Wm. I. Lyon, Waukegan, Ill. A tree trap was shown that had trapped Yellow-bellied Sapsuckers, Downy and Hairy Woodpeckers, Black and White Warblers, and a recent success in trapping over 100 Brown Creepers. A partial albino Grackle, with grayish white on tail feathers, was captured and experimented with.

Sparrow records were as follows: Two immature Harris Sparrows were trapped, a few White-crowned Sparrows were trapped each spring and fall. Total taken, 80. Over 1,000 White-throated Sparrows have been banded and not a single return. No returns known on migration routes. White-throated Sparrows often injure their beaks; a whitish spot appears on the upper mandible near the tip of the beak. In about a week the injured spot seems to contract and leave a dent in the beak; in a few days the tip raises up, and in another day or two it falls off. This year some that have lost their beak tips are being confined to see if the beak will regenerate again to its natural size.

Tree Sparrows show that they return to winter home; out of 46 trapped first year, 8 returned last year and 150 more were banded. Song Sparrows are good returners and have been taken in some proportions. Three have returned the second time; 67 Lincoln Sparrows have been trapped, but no returns to date.

Fox Sparrows are not plentiful, but 45 have been banded. One stayed at the station all winter and was trapped 165 times. Cut apples

proved to be the alluring bait for Cedar Waxwings; 200 were banded and one was taken ten days later by Mrs. H. C. Miller at Racine, Wis.

Time and discussion was cut.

"Scientific Results from Bird Banding," illustrated by lantern slides, by S. Prentiss Baldwin. It was announced at the start that Mr. Baldwin would have to cut his time in half so he could only hurry through a few of his many wonderful experiences. Mr. Baldwin offered an opportunity to some one to go to Thomasville, Ga., the coming season to operate his station; and stated that there would be an extensive trapping and study of the Mourning Dove situation in that district. There is also to be a very extensive study of the Quail, to be carried on in the nearby district, that will be continuously conducted by an experienced ornithologist, with helpers, that will extend over a three-year period. Mr. Baldwin's House Wren study has been more than doubled and will take four or five years more to complete. It was very disappointing to have such a fine paper cut in half and no time allowed for discussion.

The Annual Dinner of The American Ornithologists' Union was held at the Colonial Club, Cambridge, Mass., at 8 P. M. Wednesday evening, where the usual good fellowship prevailed. Dr. C. W. Townsend, President of the New England Bird Banding Association, was the main speaker of the evening. With lantern slides he showed a famous old book that had just been discovered and the slides, of the illustrations in the book, showed many gentlemen in ancient costume, but the faces seemed to be very familiar, and explanation of their occupations were very interesting to all present. One conspicuous among them appeared to be the Father of Bird Banding, who was apparently in the act of coaxing a Lady Wren to give her correct age.

At each plate was an Auk shaped menu card and a copy of that rare journal, "The Auklet," a semi-occasional Journal of Ornithological Disputanda. The growing popularity of Bird Banding was demonstrated by their receiving two pages of attention in the Journal as follows:

BIRD BANDING DEPARTMENT

Conducted by W. I. Tyger

We regret to announce that we have been unable to accept the generous offer of Messrs. Fetcha and Whistle to purchase the entire issue of the Auklet for bird-banding notes. The following, however, are gratuituously inserted:

Willay Markeighty writes: "A successful trap for Hummingbirds can be made from a ladies' hair-net applied to the far end of a forked twig. It works best with the use of a good bait, particularly mint julep and sugar." Since the banding of Hummingbirds is likely to increase through this important discovery, members intending to trap Hummingbirds should make early application to the U. S. Biol. Survey, as a federal permit is required for the possession of bait.

Simultaneously with announcement of the great increase of divorce in Chicago, comes word from our valued correspondent, S. Pendthrift Borldwejn, that the House Wrens of Ohio are substituting aluminum bands for hus-bands, with the resulting decrease in infant morality. The correlation of the two phenomena is believed to be due either to sun-spots or to fly-specks, though additional data are needed this coming year.

It is expected that Rabbi Flescher will inaugurate a movement to unite the N. E. B. B. A. and the Y. M. C. A. in a cheer-up campaign.

At the recent city election in Philadelphia, Dr. Whitston tried the experiment of banding all voters, with the result that 50% repeats were discovered.

WORK OF THE JUNIOR BRANCH OF THE NEW ENGLAND BIRD-BANDING ASSOCIATION

The work of this branch has now begun in earnest and we are able to report that within the month little Harry Overholt has banded an Old Crow and plucked Four Roses from the banks of the Sunny Brook at the Old Taylor place on the outskirts of Melville.

Tom Gin has been similarly employed on the Bull Bats of Green River, once a noble stream, but now nearly dried up, though we suspect the great attraction for Tom in that vicinity is one of the Vermouth girls.

The meeting of the A. O. U. will be given over so largely to the work of the Bird-Banders that it will be unnecessary here to go into details. We add, however, a list of the latest recruits to the Junior Branch:

Della K. Tessin	F. Roth	Aline Kidd	Ella Gant
Ida Know	Etta Lott	A. Mary Flapper	Mag Nesia
Gladys Gone	Meta Ford	Addie Noyd	Polly Wog
Perry Winkle	Millie Tant	Odette Offutt	Carry C. Noyle
Freda Gain	Millie Terry	F. Irma Ment	Tom Gin
Ethel Alca Hall	Amelia Rate	Andy Lucia	

At the end of the Chapter there is a picture of a little bare-legged birdie in a frame. His title seems to have been omitted; we think it should be, "Yes, He Wears no Band."

Friday, October 12, was given over to the field trips. The Bird Banding trips started from the South Station at 8 A. M., where we found Mr. Whittle and Mr. Floyd waiting for us. We took the train to Cohasset and hiked to the club house to watch the migration of the Scoters and other water birds. Unfortunately there was a fog and we could see very few of the ducks. There was a continual shooting by the gunners in the boats, but we did not see any ducks fall. We spent the morning about this place and observed a number of smaller birds in the brush just back of the point. Each one had his own lunch, and hot coffee was served for us at noon, then we started for the Bird Banding stations, with a hike down through the very attractive piece of woods, but on account of the great number in our party there were not many birds seen. All of the country seemed to be wonderfully covered for attracting birds.

We met the busses at the end of our hike, which took us to Mr. Richard B. Harding's place, where they had quite a number of traps in operation; the grounds were wonderful and offered many opportunities for trapping birds; plenty of trees and underbrush for cover and food, the land extending out to the ocean waters, where there are chances for the shore birds.

From there we went to Mr. Conover Fitch's place, who was just starting in with the Bird Banding work, but the grounds offered many inducements to the birds, so it was just natural that he should have a Bird Banding station in such a place.

Mr. Whittle's was the third stop and he showed us some new forms of drop traps; also one window trap where they had trapped over 500

Purple Finches. He used plenty of water dishes to attract birds with and it was a very ideal place.

Our last stop was at Mr. Lawrence B. Fletcher's place. We were greeted at the entrance by a large covered winter feeding station, with a number of evergreens temporarily set in the ground for the birds to use as lighting perches and for attraction. On the other side of the house, which faces down towards the small lake, they had a number of drop traps which operated with strings from the porch. With the water and the brush and the open land Mr. Fletcher has chances to trap all kinds of birds in his very ideal place.

A number of people took advantage of the trip and had a very enjoyable time. We caught our train back to the South Station and just crossed the street to the Hotel Essex for the dinner under the auspices of the New England Bird Banding Association. There was a very good attendance and Alfred O. Gross of Brunswick, Maine, acted as toastmaster. There was a message of welcome from the President, Dr. Charles W. Townsend, and Dr. Witmer Stone told us how he joined the American Bird Banding Association in 1909, and encouraged those who were just getting into the work today to greater activities. Mr. F. C. Lincoln of the Biological Survey told some of the life history study of birds that has been started by the investigations, and brought to the meeting the message of inspiration for more work. W. I. Lyon, Secretary of the Inland Bird Banding Association, told of the developments through the central part of the country. There followed some slides by Mr. Fletcher, showing methods of protection of birds, also one interesting set of slides of a three story window shelf where they had been successful in trapping over 200 birds during the summer season. With many good-byes after the adjournment of the meeting, we all started for home.

A CONVENTION WHOLLY DEVOTED TO BIRD BANDING

The Inland Bird Banding Association completes a two-day program of meetings and scientific papers at Indianapolis.

The Inland Bird Banding Association accepted the invitation of the Indiana Audubon Society, and the Nature Study Club of Indiana, to hold its annual meeting in Indianapolis on November Second and Third. The first activities—the formal business session—was held at the Hotel Lincoln beginning at 3 o'clock, November second. Soon after the members were assembled they were invited to adjourn to the roof of the building so there might be a group photograph taken of those present. On returning they were called to order, in the assembly room, by the President, Mr. S. Prentiss Baldwin, who welcomed all those present and then stated the purpose of the meeting and called for the reading of the minutes by W. I. Lyon, Secretary. They were read and approved. Mr. Herbert L. Stoddard, Treasurer, gave the account of the year's finances, which was accepted. The next order of business was the election, and on motion President Baldwin appointed a nominating committee consisting of Mr. O. M. Schantz, Mr. F. C. Lincoln and Mr. Percival Brooks Coffin. The committee retired and in a short time announced that they were ready to report. They recommended that

all present officers be elected for the ensuing year. As there was no opposition there was a motion made and carried that the Secretary be authorized to cast the vote of the Association. Plans for the coming year were discussed and many activities suggested before the meeting adjourned.

The first public meeting was held in Cropsey Hall, Central Library building, on November second at 8 p. m. The room was well filled when Mr. Alden H. Hadley, President of the Indiana Audubon Society, welcomed all present and stated the reason for the meeting, also giving us many interesting facts about the Indiana Audubon Society.

Mr. Richard Lieber, Director of Conservation of Bird Life in the State Parks in the State of Indiana, gave a very interesting talk, telling of the original forests that were situated in Indiana, and gave many incidents of the lives of the birds that have totally disappeared from the country. He also told of the future plans for Bird Conservation in the State Parks.

Next came Mr. S. Prentiss Baldwin, President of the Inland Bird Banding Association, with a talk illustrated by lantern slides. "The Methods of Trapping and Banding Wild Birds, and Interesting Stories Derived from these Methods." Mr. Baldwin's paper was even more interesting, than it has been in the past, for he had many new adventures to tell, and the whole evening before him, so he did not have to be hurried. Mr. Baldwin's talk was intended to interest the general public in the idea of Bird-Banding so they would attend the meeting on the next day. From his many intense years of study with the House Wrens he gave us many inside lights on their family relations, of their marriages, divorces, and infidelity; also showing a number of new developments that have come to light in the past year. His House Wren stories are always well received by the public because they are so new in the history of bird life. In telling about the White-throated Sparrows that come to a patch of shrubbery near the house, Mr. Baldwin stated that they had been there regularly since 1915. and he told of the Chimney Swift, that calls regularly at Gates Mill, and was banded there in 1916, reporting on thime this year.

Saturday, November third, at 9:30 a. m., the meeting opened at the Herron Art Institute. Mr. S. Prentiss Baldwin, President, gave a few words of welcome to the good sized audience and stated that all the meetings would be open to the public and invited every one interested in Bird Banding.

"A Naturalist in South America," by W. S. Blatchley was the opening subject. Mr. Blatchley gave a very interesting talk on his voyage and travels, stopping at Barbados Island, Rio De Janeiro, Montevideo, Buenos Aires, then across country over the mountains down into Chile, and up the coast to Bolivia and Peru, and home through the Panama Canal. During the entire trip he stopped at all the museums and bird collections that were available.

Mr. Herbert L. Stoddard, Treasurer of the Inland Bird Banding Association, read a paper entitled "The Shore Birds of Lake Michigan." Mr. Stoddard's paper was a scientific list with observations made during

the past twelve years in the territory from Michigan City, Indiana, to Sheboygan, Wisconsin; he has walked over this entire territory except where cities obstruct both man and birds, and he has collected many rare specimens for the different museums. At present he is forming some very interesting "Shore Bird Groups" for the Milwaukee Museum. He gave many interesting observations of birds that through the persistent shooting have become very rare, and of those that on account of their protective color are hard to observe. Mr. Stoddard and Mr. Jung of Milwaukee have succeeded in making traps that have taken Plovers and Sandpipers, and during the past season they have succeeded in placing over one hundred bands on these birds.

"Bird Banding Under the United States Bilogical Survey" by Mr. Frederick C. Lincoln, U. S. Biological Survey. Mr. Lincoln gave a very good account of the increase in Bird Banding and requested all present to lend their influence in getting more members for the Inland Bird Banding Association and operators to place bands in their districts. He explained the many chances that our vast district has for new and original work, and spoke of the appreciation by the Survey of the members who have contributed to the work in the past. Then, with the lantern slides to illustrate his own work in duck banding, Mr. Lincoln showed a number of pictures of duck traps, explaining the difficulties and the successes in trapping wild ducks and from his explanations it seems that ducks are trapped just as easily as the small birds, and if anything, in larger quantities. His record for one day's banding was one hundred ninety ducks and over one hundred having been taken from one trap in a single catch. He stated that over 4,000 Mallards have been banded at the present time, and showed many maps giving the location of the returns from these birds, which gave a very good idea of the routes they were following.

Adjourned for lunch.

Saturday, November Third — The Afternoon Session
Mr. Samuel E. Perkins, Presiding

"Methods and Results in Banding Wild Birds" by Wm. I. Lyon, Secretary of the Inland Bird Banding Association, illustrated by slides. The selection of a position for a bird trap is very important and it was pointed out that it was necessary, in many cases, to have the traps close to shrubbery that is adjacent to tall trees. A corner of a hedge or fence that is protected to the north and west is a desirable location, or at the foot of a hill where the hillside faces mainly to the east, so that the morning sun will make it a warm and comfortable feeding place. Constant cleaning of the trap and changing of the bait, and everlasting vigilence against pests brings success. Study of the location of the trees were shown to which most of the climbing birds will be attracted. The slides that produced the most interest were those of the new tree trap which has just proved its efficiency, in the past few months, in trapping Downy and Hairy Woodpeckers, Yellow-bellied Sapsuckers, White-breasted Nuthatches, Black and White Warblers, and over one hundred Brown Creepers. The interest of the audience was shown by their stopping the speaker a number of times and requesting slides

to be shown again, measurements to be given and more time allowed for some of those interested to make a sketch. The development of new traps is very important, especially for taking birds that have not been trapped in the past, and the audience was interested in the many new schemes that were shown.

Mr. Albert F. Gainer, of Nashville, Tennessee, gave a very interesting paper on "Identification of Birds without the Use of Glasses, Their Color, or Their Notes." Mr. Gainer has made a study of identifying birds by their actions, and through it is able to identify them at a long distance as accurately as many of the others who use glasses and the other general means. His paper was very interesting to those present.

Mr. T. E. Musselman of Quincy, Ill., was on the program to show lantern slides and tell some stories on Bird Banding at Thomasville, Georgia, while he was in charge of Mr. Baldwin's trapping station last winter. As Mr. Musselman was, at the last minute, unable to attend the meeting, he asked Mr. Baldwin to show the slides and tell something of his experience as Mr. Baldwin was there last winter with him. Of course Mr. Baldwin could not give many of the very interesting stories which came into Mr. Musselman's personal experience but the slides were very interesting.

Mr. Baldwin then gave some talk on "Bird Banding as used in the Intensive Study of One Species." His talk was very similar to what had been intended for the A. O. U. Convention with the addition of many interesting stories and details which he was unable to give at Cambridge on account of the lack of time. As Mr. Baldwin has lived with his wrens, so his records will live with us forever. His explanation of the detail in the careful study that he is giving these birds at present shows that his work must be continued four or five years more to get complete results which he hopes to have published at the completion of his efforts.

Some very interesting features of the work undertaken by the Inland Bird Banding Association during the past year were brought out at this session.

The Inland Bird Banding Association has been co-operating with the Cleveland Museum of Natural History and the Biological Survey for the placing of bands on the sea birds of the South Atlantic and Indian Ocean. It seems that an expedition has been organized by The Cleveland Museum of Natural History, with George Finley Simmons as Commander, for a two-year collecting trip in the South Atlantic on the Schooner "Blossom." The Inland Association took the matter up with Commander Simmons and their conference resulted in the Expedition taking 8,000 bands to use in the Bird Rookeries of the South Atlantic. While it may be that very few of these bands will ever be returned, it is evident that any return from these bands will be of very great interest.

The Inland Bird Banding Association has been active in coöperation with the U. S. Biological Survey in organizing the Quail Sportsmen in the vicinity of Thomasville to make a complete study of the life history of the quail. Funds have now been provided by the Quail Sports-

men and, under arrangements with the Biological Survey, an ornithologist and assistant will be employed, and stationed between Thomasville and Tallahassee, to make such a study for a period of three years or longer, if necessary. Bird Banding will be the basis of a considerable part of this work as the quail will be banded in coveys and then, as they are shot through succeeding years, record will be kept of where each bird is found in order to show whether quail migrate or scatter to any great extent.

In addition to the quail study, it is expected that Mr. Baldwin and probably one or two other ornithologists will be at the trapping station in Thomasville at least during February and March to carry on the work as it has been done during the past ten years and, in addition, it is hoped to organize upon an adjacent plantation an extensive experiment in the trapping and banding of mourning doves. Anyone who may be interested to know more about the Quail Study or who may wish to take part in or visit the work carried on at Thomasville, should write to S. Prentiss Baldwin, 817 Williamson Building, Cleveland, Ohio.

The Annual Dinner in the evening at the Hotel Lincoln was attended by the three organizations. Dr. Stanley Coulter was unable to attend so Mr. Percival Brooks Coffin, Councillor of the Inland Bird Banding Association, acted as presiding officer. The address of the evening was by Dr. Amos W. Butler, and informal talks by Mr. O. M. Schantz, Professor C. H. Eigenmann, Mrs. H. C. Miller, and others. There was a full attendance and everyone enjoyed the evening very much.

The members of the Inland Bird Banding Association were enthusiastic in their praise of the courtesy shown them and the able handling of the convention by their hosts, the Indiana Audubon Society, and the Nature Study Club of Indiana. They both seem very live organizations and under able management.

The following letter will be of interest at this time as Mr. Baldwin is now inviting applications from any who may wish to volunteer for the work and experience at Thomasville this winter.

Members of the Inland Bird Banding Association.

Annual Meeting, Indianapolis, November second, 1923.

Gentlemen:—

I am sorry that I cannot appear before you to give an account of the wonderful experiences which I encountered at Thomasville, Ga., during February and March of last year. However, Mr. Baldwin will tell many of the experiences and give a careful resume of the work accomplished there by us. I have asked him to show slides which will no doubt be interesting.

I wish to place before the Association a few of the possibilities of Thomasville as I saw them. The situation is admirable and the six or eight weeks which any man will spend there will be more of the nature of a vacation than a period of work. Birds are very numerous and the best of traps are all ready for the experimentor when he arrives. However, I think it would be wise for the association to supply Mr. Baldwin with two workers this year as they could better plan the

activities about the plantation. One can take charge of the bird banding proper, while the other can give his particular attention to the diseased condition of the feet of the chipping sparrows which are captured. In order to make the experiment more effective, I suggest that the man who has charge of the last feature have a notebook with numbered pages and that before starting the experiment that he have a stencil made showing the foot of a bird. Such a stencil can easily be made by pasting carbon paper under a picture of such a bird's foot, but I think that better would be a rubber stamp made from a good drawing. Whenever a bird is captured with a diseased condition of the feet or tarsus, the picture can be made at once and the development of the trouble from day to day can be traced on the drawing. I used this method in my work this past year and expect to place in Mr. Baldwin's hands a paper containing the results of my work along this line. Another feature which I should advise is the matter of transplanting chipping sparrows from the Wade plantation to Inwood. With one of the fall traps, it would be a very simple thing to capture from twenty-five to fifty of these birds at the Mill pond. It would be interesting to band these birds, then transport them to Inwood plantation, two miles away and turn them loose among the chipping sparrows in that neighborhood, keeping track of the number that would be subsequently caught, watching to see whether they would all gradually disappear, returning to the Wade plantation several miles away. In our experiments in former years, we have found that many of the birds return to Inwood from year to year. Not only do they return to this plantation but they are caught in subsequent years at the same or a neighboring trap to the one at which they were caught in former years. If these birds have that very fine sense of orientation, I am wondering whether it would be effective should such an experiment be tried and how long would it take for them to return to the Mill pond and what percent. would go and what percent. would remain.

There were some mourning doves at Inwood while at Mill pond there were from three to five hundred. I constructed a trap last year with the intention of catching these doves, but I feel that the trap can be improved upon. As it stands, it is only effective when someone is there to drop the two doors. The mourning doves will wander around such an inclosure or trap, eagerly hunting an entrance, and if several entrances such as are found in the government sparrow traps, should be made, I believe that mourning doves would be caught all day long. I see no reason why several hundred doves should not be captured and banded during the 1924 season. However, the trap should be placed early, in fact before the experimentors go to Thomasville so that the doves will by then begin to become acquainted with its appearance. I feel that this is particularly important, as no doubt the doves scatter over the entire eastern section of the United States and many interesting records would be the result. These are suggestions which open themselves to the experiment should several men spend their time at Thomasville.

When the men for this work have been selected, I hope they will

feel free to write me for any personal suggestions that I have, yet you will find that the material which Mr. Baldwin has gathered together for your instructions will be sufficient to cover your every desire. I am sorry that my work prevents my being with you, however, I wish you a very successful meeting and I hope that next year I may have the pleasure of meeting you all in person.

Quincy, Ill., November 1, 1923. T. E. MUSSELMAN.

BIBLIOGRAPHY OF BIRD BANDING IN AMERICA

BY S. PRENTISS BALDWIN

This list is intended to include the more important papers on bird banding, without attempt to include every paper on the subject. During the last three years the newspapers and magazines have contained many articles, which have been chiefly compiled from the following papers. For the benefit of those who wish to complete their files there is stated as to each paper, whether the paper can be obtained and to whom to apply for it:

1903. Cole, Leon J., Suggestions for a method of studying the migration of birds: Bull. Michigan Orn. Club, vol. 4, No. 1, p. 19, March. Out of print.

1904. Bartsch, Paul, Notes on the herons of the District of Columbia: Smiths. Misc. Coll., vol. 45, Quart. Issue, vol. 1, pp. 104-111. Out of print.

1904. Taverner, P. A., The tagging of birds: Bull. Michigan Orn. Club, vol. 5, No. 2, p. 50, June. Out of print.

1909. Cole, Leon J., The tagging of wild birds as a means of studying their movements: Auk, vol. 26, no. 2, pp. 137-143, April. Out of print.

1910. Cole, Leon J., The tagging of wild birds; report of progress in 1909; Auk, vol. 27, no. 2, pp. 153-168, April. Out of print.

1913. Cleaves, Howard H., What the American Bird Banding Association has accomplished during 1912: Auk, vol. 30, no. 2, pp. 248-261, April. (Reprinted in Ann. Rept. Smiths. Inst. for 1913, pp. 469-479, 1914.) Out of print.

1919. Baldwin, S. Prentiss, Bird-banding by means of systematic trapping: Abstr. Proc. Linnæan Soc., New York, no. 31, pp. 23-56.
First systematic description of the methods of trapping and banding, and instructions as to traps, handling birds, and procedure. Out of print.

1921. Baldwin, S. Prentiss, Recent returns from trapping and banding birds: Auk, vol. 38, no. 2, April.
Report of "Returns" taken at Cleveland, Ohio, and Thomasville Ga., in 1919 and 1920.

1921. Baldwin, S. Prentiss, The marriage relations of the house wren: Auk, vol. 38, no. 2, April.
A brief study of the mating of House Wrens.

1921. Lincoln, Frederick C., The history and purposes of bird banding: Auk, vol. 38, no. 2, April.
The above three papers may be obtained, bound together in one cover, upon application to U. S. Biological Survey, Washington, D. C.

1921. Lincoln, Frederick C., Instructions for "Bird Banding," Department Circular 170, U. S. Biological Survey.

1922. Baldwin, S. Prentiss, Adventures in Bird Banding in 1921: Auk, Wilson Bulletin, March, 1922, may be obtainable by purchase from Wilson Bulletin, Oberlin, Ohio.

1922. Baldwin, S. Prentiss, Adventures in Bird Banding in 1921: Auk, vol. 39, no. 2, April, 1922.
Report of Cleveland and Thomasville Stations and illustrations of two forms of traps.

1922. Talbot, L. R., Bird Banding at Thomasville, Ga., in 1922: Auk, vol. 39, no. 3, July, 1922.

1922. Lincoln, Frederick C., Trapping Ducks for Banding Purposes: Auk, vol. 39, no. 3, July, 1922.

1922. Cole, Leon J., Early History of Bird Banding in America. From Wilson Bulletin, June, 1922, p. 108-115.

1922. Bird Banding Department, under the direction of Wm. I. Lyon, Wilson Bulletin, Sept. 1922. May be obtainable by purchase from Wilson Bulletin, Oberlin, Ohio.

1922. Bird Banding Department, under direction of Wm. I. Lyon, Wilson Bulletin, December, 1922, containing an account of the organizing of the Inland Bird Banding Association.

1922. "The First Year of the New England Bird Banding Association," Bulletin of Essex County Ornithological Club, 1922, apply to New England Bird Banding Association, Room 940, 50 Congress St., Boston, Mass.

1923. Bird Banding Department, under the direction of Wm. I. Lyon, Wilson Bulletin, March, 1923. An account of the New England Bird Banding Association and other banding notes.

1923. Oberholser, Harry C., Bird Banding an Aid to Migration Study, Auk, vol. 40, no. 3,, July, 1923.

1923. Musselman, T. E., Bird Banding at Thomasville, Ga., 1923: Auk, vol. 40, no. 3, July, 1923.

1923. Bird Banding Department, under the direction of Wm. I. Lyon, Wilson Bulletin, June, 1923. Miscellaneous Bird Banding items.

1923. Bird Banding Department, under the direction of Wm. I. Lyon, Wilson Bulletin, September, 1923. Miscellaneous Bird Banding items and account of the Eastern Bird Banding Association.

1923. Nichols, John T., Inland Bird Banding Association: A review of Bird Banding. Forest & Stream, March, 1923.

Most of the papers listed as of the years 1921 and 1922 and all the papers listed as of the year 1923 have been furnished as reprints by S. Prentiss Baldwin to the U. S. Biological Survey in quantity sufficient to supply all who have Bird Banding permits.

Those who wish to complete their files of the last three years should apply therefor to the U. S. Biological Survey, Washington, D. C., and will obtain copies free, so long as they last.

It is possible that some of the papers marked "out of print" may be obtained by purchase from the original source of publication.

LECTURE

Bird Banding; Illustrated by Lantern Slides

The Inland Bird Banding Association is preparing a very interesting lecture, to be amply illustrated by colored slides; and which will be for rental or loan to Audubon Societies, Nature Study Clubs and other organizations. Ready by January 1, 1924.

Apply to Wm. I. Lyon, Secretary of Inland Bird Banding Association, 124 Washington Street, Waukegan, Ill.

Bird Banding Notes

Edited by Frederick C. Lincoln

issued at irregular periods to persons holding Bird Banding Permits; issued by the U. S. Biological Survey; apply to the Biological Survey for these.

No. 1, April 15, 1922.
No. 2, June 15, 1922.
No. 3, September 8, 1922.
No. 4, January 20, 1923.
No. 5, January 29, 1923.
No. 6, March 21, 1923.
No. 7, June 1, 1923.
No. 8, September 24, 1923.

The following papers have been published in Illinois:

1921. Smith, Frank, Illinois Birds as Travellers: Illinois Arbor and Bird Days, Circular 151, Superintendent of Public Instruction, Springfield, Ill.

1921. Lyon, Wm. I., Bird Banding at Waukegan; The Audubon Bulletin, spring 1921.

1921. Lyon, Wm. I., Securing Life Stories by Banding Birds. The Audubon Bulletin, fall 1921.

1922. Lyon, Wm. I., Bird Banding as an Opportunity to Study Characters and Dispositions." The Audubon Bulletin, spring 1922.

1922. Lyon, Wm. I., "Characters and Dispositions II." The Audubon Bulletin, fall, 1922.

1923. Musselman, T. E., Bird Banding at Thomasville, Ga. The Audubon Bulletin, spring 1923.

For these papers write to Illinois Audubon Society, 10 South LaSalle Street, Chicago.

Miscellaneous Notes on Bird Banding are published at frequent intervals in the Notes for Observers, issued under the direction of Edward Howe Forbush, State Ornithologist, State House, Boston, Mass. Apply to Mr. Forbush.

Information, or papers and notes on Bird Banding will appear from time to time in the following Magazines, which are recommended to those who are interested in Banding:

The Auk, Quarterly Journal of Ornithology, published at 8 West King Street, Lancaster, Pa.
Editor, Dr. Witmer Stone, Academy of Natural Science, Logan Square, Philadelphia, Pa.

The Wilson Bulletin, Oberlin, Ohio, edited by Dr. Lynds Jones, carries in each issue Bird Banding Department under the direction of Wm. I. Lyon, Secretary of the Inland Bird Banding Association.

The Condor, Museum of Vertebrate Zoölogy, Berkeley, California, Editor, Dr. Joseph Grinnell.
Carries in each issue a Bird Banding Department under the direction of J. Eugene Law.

Bird Banding Associations

New England Bird Banding Association.
Territory: The New England States, the Maritime Provinces of Canada, Newfoundland and Quebec to Labrador.
Laurence B. Fletcher, Secretary,
50 Congress Street, Boston, Mass.

Eastern Bird Banding Association.
Territory: Ontario, New York, New Jersey, Delaware, Pennsylvania, Maryland, Virginia, West Virginia and South Atlantic States.
Mrs. J. E. B. Webster, Secretary.
16 Davis Place, East Orange, N. J.

Inland Bird Banding Association.
Territory: The Mississippi Valley from the Appalachian Mountains to the Rocky Mountains, including the Canadian Provinces of Manitoba, Saskatchewan and Alberta.
Wm. I. Lyon, Secretary,
124 Washington Street, Waukegan, Ill.

The Cooper Ornithological Club.
Territory: Pacific Coast and Rocky Mountain States, British Columbia and Alaska.
Chairman of Committee, J. Eugene Law, Altadena, Calif.

The Bird Banding Associations attempt, so far as may be possible, to supply information to those who may be interested to engage in this interesting game, and to furnish lectures to Audubon Societies, Nature Clubs or other organizations wishing to learn of this subject; and to furnish matter and illustrations for publication in magazines and newspapers. For this service apply to the Secretary of the Association which covers your region.

The Bird Banding Associations are doing a vast work in awakening interest in the study and protection of birds, and should have the active moral and financial support of every person who is interested in birds, whether such person intends to do banding or not. Persons who cannot do banding, will find it interesting to become Active or Sustaining Members of an Association in order to keep in touch with this interesting sport, the sport which is also a Science.

BIRD COLONIES OF THE GREAT LAKES

Every reader of the Wilson Bulletin can find some way to help the Inland Bird Banding Association in its efforts to have the bird colonies of the Great Lakes systematically worked for banding during the coming year. If you know of sites that have been used in the past as breeding places that you think are likely to be used during the coming year, we will appreciate it very much if you would send us such information. We hope in this way to have an authentic list ready by the nesting season of next year. In the meantime we wish to solicit volunteers who are willing to use their vacations in going to some of these colonies to place bands. We hope to have the Great Lakes covered more thoroughly through coöperation than if worked by individuals. If you know of anybody who is willing to volunteer information or services, please notify W. I. Lyon, 124 Washington Street, Waukegan, Illinois.

COMMUNICATIONS

WORLD BIRD PROTECTION—A LEAGUE BEING FORMED TO PROTECT BIRDS OF ALL COUNTRIES

New York City, Sept. 6, 1923.

Although it has proven a difficult matter to create a political League of Nations, T. Gilbert Pearson, President of the National Association of Audubon Societies, has demonstrated the possibility of creating a league for the very useful purpose of protecting the wild birds of the world. Leading scientific and conservation societies in ten countries have now organized and pledged to active endeavors for the protection of the birds in their countries, and in aiding similar movements in more benighted regions.

This movement was launched at a conference held in London in June last year. On invitation of Mr. Pearson delegates from several countries met in the home of Hon. Reginald McKenna and determined that such action was necessary if much of the valuable bird life is to be saved from despoliation. Among the very active members of this conference were Lord Edward Grey and Lord Buxton of England; P. G. Van Tienhoven of Holland, and the eminent naturalist, M. Jean Delacour of France.

Mr. Pearson, President of this International Committee who has just returned on the U. S. Steamship *Leviathan* from a lecturing and organizing tour through seven of the countries in Europe, said today: "Europe is looking to America for leadership in some of the lines of endeavor in which we as a nation have specialized. There is no country in the world that is so thoroughly organized and has such advanced laws for bird protection as the United States, and many of our methods can be and doubtless will be adopted to meet European conditions.

"Through southern Europe especially very little attention is paid to bird protcetion. This may be illustrated by the fact that in all of France in the year 1921 there were only sixty convictions for violation of the bird laws. During the same period in New York State alone there were more than one thousand. In Hungary I was told that during the past year with all of the thousands of bird killers in the country not one had been prosecuted. In Italy I saw nets, traps, and various cages used to catch small songbirds for food. There is a vast traffic in the bodies of these little songsters in that country. In Rome I saw in cages small birds whose eyes had been blinded by red hot irons on the theory that in their darkness they would sing better and thus prove more effective decoys in alluring other feathered friends to destruction.

"Our international organization is now in effective operation in the United States, Canada, Australia, Norway, England, Holland, Luxenburg, Switzerland, France, and Italy. Other countries have recently been invited to unite with the movement and action by them may be expected soon. Members of the Committee in the different countries are formed into National Sections, which deal especially with bird protective problems distinctly national in their scope.

"Everywhere I went in Europe our plan was received most cordially.'

—From National Association of Audubon Societies, 1974 Broadway, New York City.

KILLING BULLBATS

New York, Sept. 15, 1923.

In many communities the shooting of Bullbats has been going on in this year of Grace, 1923, although in every state where the bird is found, it is protected by state laws. In addition to this there is a federal law imposing a fine of $50 for every one of these birds that is killed. The reason that the law-makers of our land have enacted statutes of this nature is because that of all the birds that wing their way over our fields and forests there is not one more valuable as an insect-destroyer than the Bullbat. About various villages these birds gather in the late summer evenings to hawk for insects. Many men, either through ignorance or in defiance of the law, amuse themselves by testing their marksmanship. Sometimes the birds are eaten, often they are simply left lying where they fall.

Mr. T. Gilbert Pearson, President of the National Association of Audubon Societies in this city, said today that among the letters of complaint regarding the killing of these birds, which have recently come to him, was one from Biltmore, North Carolina, in which the writer said: "For two afternoons I sat on the front porch and heard the firing of a gun. A Bullbat fell dead on the opposite side of the highway. I crossed the road and made inquiry. The man readily gave his name and said he killed the birds to feed his coon, which he had in captivity, for the purpose of helping teach his dogs to hunt coons. He seemed to be a good natured man and apparently did not know it was against the law to kill insect-eating birds. How I wish the papers would publish more articles regarding the bird laws."

Mr. Pearson added, "I have personally seen wounded Bullbats on the ground the next day after such a hunting party had been amusing itself. The correct name of this bird is the Nighthawk. It belongs to the Family of "Goat-suckers" and is closely related to, but a distinct species from, the Whip-poor-will with which it is often confused in the minds of the country people. In many parts of the South there is found the Chuck-will's Widow, another closely related form. Examination of the stomach of a Nighthawk often reveals a large number of mosquitoes, insects which annoy and constantly carry malaria and other diseases. In shooting a nighthawk a man is killing one of his best feathered friends."—From National Association of Audubon Societies. 1974 Broadway, New York City.

PUBLICATIONS REVIEWED

Birds of the New York City Region. By Ludlow Griscom, Assistant Curator of Ornithology, American Museum of Natural History, with the coöperation of the Linnæan Society of New York. Published by the Museum. 1923.

There are six colored plates (Rose-breasted Grosbeak, Goldfinch, Scarlet Tanager, Tufted Titmouse, Wood Thrush) from the National Association of Audubon Societies, thirty text figures in black and white, and an excellent map of the region. The Introduction of 51 pages treats of Area Included, Life-Zones, Seasonal Variation in Bird-Life, Migrations and Movements of Local Birds, Local Regions, The Local Collection, Changes in Bird-Life, and Bibliography of Useful Literature. Then follows the Anntoated List of Local Birds, covering 326 pages, in which 299 species are treated, and this is followed by an Appendix that discusses Extinct and Extirpated Species, Introduced Species, Hypothetical List, a short Errata, and a complete Index. On the technical side the book is marked by the absence of trinomials except where they are essential for clearness, and by lack of consistency in the use of the hyphen in the vernacular names. Thus it is Yellowlegs in the text, but Yellow-legs in the index; Whippoorwill in the text and Whip-poor-will in the Index. But this is a minor matter, especially when one recalls that the average printer's compositor is possessed of an enormous inertia when scientific matter is put into type.

The material which the book contains has been selected with great care for accuracy of records—it is a model in this respect. The author states that "The object of this Handbook is to render the existing information about local birds readily accessible. Its subtitle might well be: 'Our Local Birds, when and where to find them,' as these are the first questions anyone interested wants to have answered." And while he goes on to say that how to recognize the birds is outside the province of this book he does give in the text most helpful suggestions about the things to look for in species that are hard to recognize in the field. In some cases it would have added much to the certainty of identification if the author had mentioned the particular places that certain species could be found. Thus, in Ohio there is never any danger of confusing the Alder Flycatcher with the Acadian, because the one is always found in swampy regions, while the other is always found in the beech and maple woods. But this book is a valuable contribution to the ornithological literature outside of the region that it is particularly concerned with. L. J.

The Baltimore Oriole and a Biographical Sketch of Audubon. By Raphael Semmes Payne. Baltimore. The Norman, Remington Company. 54 pages. Price one dollar.

The colored frontispiece is a duplicate of the colored picture of the Baltimore Oriole, both on the protecting cover and the outside front cover of the book. In all of the pictures the color is chrome yellow instead of orange. Facing page 12 there is a half-tone picture of a nest,

and facing page 20 a black and white picture of the Baltimore Oriole, "Designed from Audubon's beautiful pictorial." The reviewer does not have access to Audubon's own description of this bird, but he wonders if the statement attributed to Audubon at the bottom of page 16 of this little book may not be wrongly quoted. "They lay from four to six eggs, and in the far South near two brooks"! While the book does not seem to the reviewer to present any new matter relating to either the bird in question or to the known biography of the illustrious ornithologist and naturalist, it is written in a pleasing manner, in large clear type and excellent workmanship.

We also wonder if the "local historian, well versed in the lore of the neighborhood," knew that the male oriole wears the brighter colors. Most writers seem to agree that the larger share of the construction of the nest is done by the female. L. J.

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INDEX

Acanthis linaria, 92, 159.
Accipiter cooperi, 86, 132, 209.
velox, 22, 41, 86, 132, 209.
Actitis macularia, 22, 76, 84, 208.
Ægialitis meloda, 76.
semipalmata, 85.
Agelaius phœniceus phœniceus, 23, 77, 133, 211.
Aix sponsa, 131, 207.
Ammodramus savannarum australis, 134, 211.
Anas platyrhynchos, 8, 130, 156, 206.
rubripes rubripes, 21, 82, 156.
Anhinga, 130.
Anhinga anhinga, 130.
Antrostomus carolinensis, 132, 210.
vociferus, 133, 210.
Anthus rubescens, 214.
Archibuteo lagopus sancti-johannis, 209.
Archilochus colubris, 23, 33, 88, 133, 210.
Ardea herodias herodias, 22, 83, 131, 207.
Asio flammeus, 132, 209.
wilsonianus, 132.
Astragalinus tristis tristis, 24, 33, 77, 93, 133, 211.
Avocet, 6, 8.
Baldpate, 10, 11, 12, 82, 105, 207.
Bartramia longicauda, 38.
Bombycilla cedrorum, 24, 33, 68, 97, 135, 213.
Bittern, 50, 78, 105, 131, 170, 173, 207.
Least, 131, 172, 173, 207.
Blackbird, Brewer's, 205.
Red-winged, 23, 49, 51, 55, 59, 77, 91, 104, 118, 133, 156, 169, 170, 171, 172, 173, 211.
Rusty, 59, 92, 133, 211.
Yellow-headed, 104, 172, 173, 211.
Bobolink, 6, 23, 90, 133, 211.
Bob-white, 27, 35, 54, 58, 59, 76, 85, 105, 131, 164, 171, 173, 208, 229.
Bœolophus bicolor, 34, 40, 71, 136, 144, 214.
Bombycilla cedrorum, 24, 33, 68, 97, 213.
garrula, 39.
Bonasa umbellus, 22, 76, 85, 131.
Botaurus lentiginosus, 22, 78, 83, 131, 207.
Branta canadensis canadensis, 18, 22, 83, 131, 207.
hutchinsi, 207.
Bubo virginianus virginianus, 56, 132, 210.
Bufflehead, 83, 157.
Bunting, Indigo, 34, 96, 104, 134, 169, 173, 212.
Snow, 93, 133.
Buteo borealis borealis, 33, 132, 209.
lineatus lineatus, 22, 86, 132, 209.
platypterus, 86.
swainsoni, 215.
Butorides virescens, 75, 83, 131, 208.
Canvas-back, 4, 16, 17, 156.
Cardinal, 34, 55, 96, 104, 105, 134, 162, 168, 169, 170, 171, 173, 177, 212, 227.
Cardinalis cardinalis cardinalis, 34, 96, 134, 212.
Carpodacus purpureus purpureus, 24 66 77, 92, 133.
Catbird, 25, 34, 50, 51, 70, 71, 78, 104, 108, 132, 142, 150, 154, 160, 162, 163, 168, 169, 170, 171, 172, 173, 175, 177, 204.
Catharista urubu urubu, 132.
Cathartes aura septentrionalis, 33, 131, 209.
Catotrophorus semipalmatus inornatus, 208.
Centurus carolinus, 33, 38, 63, 132, 210.
Cerchneis sparverius sparverius, 209.
Certhia familiaris americana, 25, 144, 214.
Ceryle alcyon alcyon, 23, 76, 87, 132, 210.
Chætura pelagica, 23, 33, 76, 88, 133, 210.
Charadrius semipalmatus, 208.
Charitonetta albeola, 83, 157.
Chat, Yellow-breasted, 27, 28, 34, 104, 135, 141, 155, 214, 219.
Chaulelasmus streperus, 9.
Chewink, 24.
Chen hyperboreus nivalis, 207.
Chickadee, 25, 50, 55, 78, 144, 170, 173, 215.
Carolina, 34, 63, 71, 136, 162, 206.

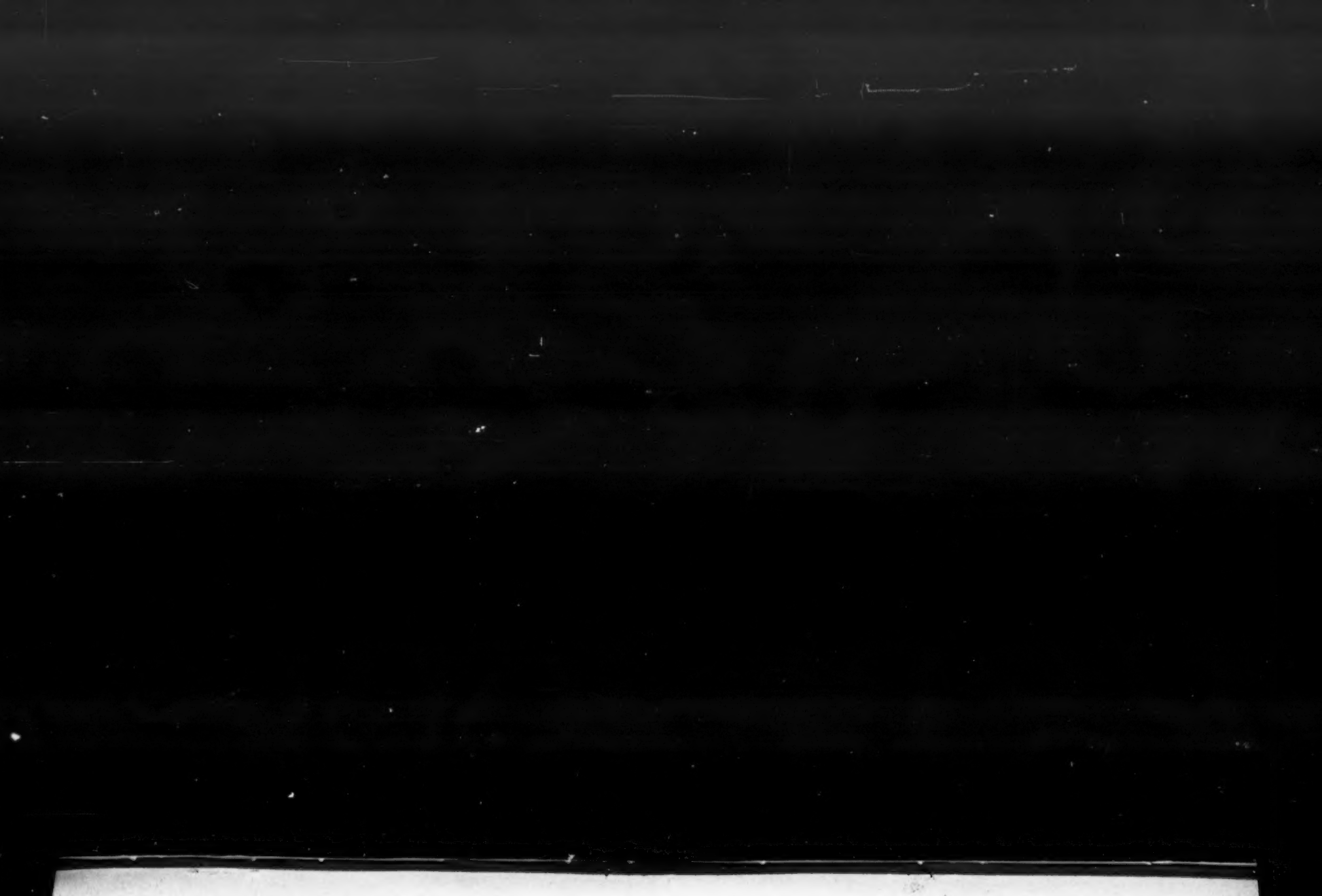
Long-tailed, 104, 105, 206.
Chicken, Prairie, 54, 59, 150, 172.
Chondestes grammacus grammacus, 39, 134, 211.
Chordeiles virginianus virginianus, 23, 33, 88, 133, 210.
Chuck-will's-widow, 132, 210, 242.
Circus hudsonius, 22, 76, 86, 132, 209.
Cistothorus stellaris, 40.
Clangula clangula americana, 83.
Clidonias nigra surinamensis, 206.
Coccyzus americanus americanus, 86, 132, 210.
erythrophthalmus, 23, 33, 76.
Colaptes auratus luteus, 23, 33, 76, 88, 132, 210.
Colinus virginianus virginianus, 76, 85, 131, 208.
Colymbus auritus, 81.
holbœlli, 37, 81.
Compsothlypis americana pusilla, 213.
usnæa, 34, 99, 135.
Coot, 50, 105, 157, 208.
Coragyps urubu urubu, 209.
Cormorant, Double-crested, 157, 206.
Corvus brachyrhynchos brachyrhynchos, 23, 33, 76, 90, 133, 211.
pascuus 148, 149.
Cowbird, 23, 35, 36, 55, 59, 77, 90, 91, 97, 98, 104, 112, 133, 141, 142, 155, 168, 171, 172, 173, 177, 211.
Crane, Sandhill, 19, 37, 131, 208.
Creeper, Brown, 25, 51, 55, 108, 144, 169, 170, 173, 214, 228, 233.
Crossbill, Red, 108, 157, 158, 159, 169, 172, 173.
White-winged, 60, 172, 173.
Crow, 23, 30, 33, 55, 56, 57, 58, 59, 61, 76, 86, 90, 104, 133, 148, 149, 169, 171, 173, 211.
Florida, 148, 149.
Cryptoglaux acadica acadica, 38.
Cuckoo, Black-billed, 23, 33, 76, 169, 173.
Yellow-billed, 76, 86, 132, 162, 171, 173, 177, 210.
Curlew, Eskimo, 205.
Long-billed, 150, 205.
Cygnus columbianus, 207.
Dafila acuta, 14, 156.
tzitzihoa, 207.
Dendroica æstiva æstiva, 24, 78, 99, 135, 213.
castanea, 139.
cærulescens, cærulescens, 24, 138.
cairnsi, 29, 34.
cerulea, 34, 139.
coronata, 24, 135, 138, 213.
dominica, dominica, 34.
albilora, 215.
fusca, 25, 139.
magnolia, 24, 135, 139, 213.
palmarum hypochrisea, 140.
pensilvanica, 78, 139.
striata, 139.
trigrina, 40, 99, 135.
vigorsi, 34, 36, 40.
virens, 25, 34, 136, 140.
Dickcissel, 104, 134, 150, 212.
Dolichonyx oryzivorus, 23, 90, 133, 211.
Dove, Florida Mourning, 100, 172, 173, 177.
Mourning, 33, 50, 52, 54, 55, 58, 59, 60, 61, 85, 105, 131, 160, 169, 170, 171, 209, 229, 236.
Dowitcher, 6.
Dryobates pubescens medianus, 23, 33, 76, 87.
pubescens, 132, 210.
villosus villosus, 23, 33, 87, 132, 210.
Duck, Black, 21, 54, 82, 156, 170, 173.
Greater Scaup, 59, 82.
Lesser Scaup, 17, 82, 156.
Ring-necked, 17, 37.
Ruddy, 18, 19, 83, 157, 205.
Wood, 115, 131, 207.
Dumetella carolinensis, 25, 34, 70, 78, 136, 142, 214.
Eagle, Bald, 26, 31, 55, 60, 74, 79, 116, 132, 209.
Golden, 31.
Empidonax flaviventris, 38, 125.
minimus, 23, 90, 133, 210.
trailli alnorum, 210.
virescens, 33, 89, 133, 215.
Erismatura jamaicensis, 18, 83, 157.
Euphagus carolinus, 92, 133, 211.
Falco columbarius columbarius, 38.
sparverius paulus, 100, 117.
sparverius, 22, 86, 132.
Finch, Lark, 5.
Purple, 24, 49, 55, 63, 66, 67, 74, 77, 92, 111, 133, 169, 170, 172, 173, 175, 211, 228, 231.
Flicker, 29, 74, 76, 104, 125, 132, 162, 170.
Northern, 23, 33, 50, 55, 59, 88, 169, 171, 210.
Florida cærulea, 75, 131, 207.
Flycatcher, Acadian, 33, 89, 133, 215, 243.
Alder, 243.

Crested, 33, 89, 104, 133, 162, 210.
Least, 23, 70, 104, 133, 171, 173, 210.
Yellow-bellied, 38, 125, 126.
Fulica americana, 157, 208.
Gadwall, 6, 8, 9, 10.
Gallinule, Florida, 172, 173.
Purple, 131.
Gallinago delicata, 37, 84, 131, 191, 208.
Gannet, 49, 52.
Gavia immer, 21, 75, 81, 130, 157.
lumme, 206.
stellata, 157.
Geothlypis trichas trichas, 25, 78, 135, 141, 214.
Glaucionetta clangula clangula, 157.
Gnatcatcher, Blue-gray, 34, 79, 104, 136, 145, 215.
Godwit, Marbled, 6.
Golden-eye, 54, 83, 157.
Goldfinch, 24, 33, 55, 77, 93, 104, 133, 170, 172, 173, 175, 211, 243.
Goose, Canada, 4, 6, 8, 18, 19, 20, 22, 54, 58, 83, 131, 207.
Hutchins, 207.
Snow, 207.
Goshawk, 54.
Grackle, Boat-tailed, 169, 173.
Bronzed, 23, 51, 59, 77, 92, 104, 118, 119, 133, 155, 162, 168, 170, 171, 172, 173, 211, 228.
Florida, 155.
Grebe, Eared, 8.
Holbœll's, 37, 81.
Horned, 7, 8, 81.
Pied-billed, 21, 81, 105, 130, 157, 206.
Grosbeak, Black-headed, 104.
Blue, 35, 212.
Evening, 38, 49, 111, 170, 171, 173, 174, 175.
Pine, 38.
Rose-breasted, 49, 96, 104, 134, 168, 169, 170, 171, 172, 173, 177, 212, 222, 243.
Western Blue, 104.
Grouse, Pinnated, 38.
Ruffed, 22, 26, 30, 38, 54, 76, 85, 131, 205.
Prairie Sharp-tailed, 150.
Sharp-tailed, 6.
Grus canadensis mexicana, 37, 131, 208.
Guiraca cærulea, 35, 212.
Gull, Franklin's, 105, 206.
Herring, 21, 49, 75, 82, 168, 170, 171, 173, 206.
Laughing, 75, 171, 173.
Haliæetus leucocephalus leucocephalus, 79, 132, 209.
Hawk, Broad-winged, 31, 33, 41, 86, 217.
Cooper's, 86, 104, 132, 209, 217.
Duck, 26, 31, 32, 33.
Ferruginous Rough-legged, 5.
Harlan's, 205.
Krider's, 54, 205.
Marsh, 6, 22, 54, 74, 76, 86, 104, 132, 172, 173, 209.
Pigeon, 38, 104, 217.
Red-shouldered, 22, 86, 132, 209.
Red-tailed, 31, 32, 33, 54, 104, 132, 209, 217.
Rough-legged, 54, 58, 116, 209.
Sharp-shinned, 22, 41, 42, 43, 86, 104, 132, 210, 217.
Sparrow, 22, 27, 31, 38, 86, 104, 132, 155, 209, 217, 228.
Swainson's, 215.
Western Red-tailed, 205.
Hedymeles ludovicianus, 212.
Helmitheros vermivorus, 56, 98, 135, 213.
Helinaia swainsoni, 163.
Helodromas solitarius solitarius, 84.
Hen, Lesser Prairie, 205.
Heron, Black-crowned Night, 61, 75, 169, 173, 208.
Grea Blue, 22, 83, 105, 131, 207.
Green, 27, 50, 75, 80, 83, 105, 131, 169, 173, 208.
Little Blue, 75, 131, 172, 173, 207.
Snowy, 205.
Hesperiphona vespertina vespertina, 38.
Hummingbird, Ruby-throated, 23, 33, 49, 88, 117, 133, 163, 210.
Hirundo erythrogastra, 24, 78, 97, 135, 212.
Hylocichla fuscens, 25, 136, 146.
guttata pallasi, 136, 146.
mustelina, 34, 136, 146, 215.
ustulata swainsoni, 25, 136, 146, 216.
Icteria virens virens, 34, 135, 141, 214.
Icterus galbula, 77, 92, 133, 211.
spurius, 38, 133, 211.
Ionornis martinicus, 131.
Iridoprocne bicolor, 24, 212.
Jaeger, Parasitic, 205.
Jay, Blue, 23, 33, 36, 50, 51, 55, 56, 74, 90, 104, 133, 162, 163, 168, 169, 170, 171, 172, 173, 211.
Canada, 172, 173.
Junco hyemalis hyemalis, 24, 94, 134, 212.

Junco, Slate-colored, 24, 51, 52, 55, 60, 94, 134, 160, 168, 169, 170, 171, 173, 175, 212.
Killdeer, 22, 50, 59, 85, 131, 169, 170, 172, 173, 177, 208.
Kingbird, 23, 33, 76, 88, 104, 133, 162, 169, 172, 173, 177, 210.
Arkansas, 104, 205.
Kinglet, Golden-crowned, 55, 136, 145, 215.
Ruby-crowned, 136, 145, 215.
Kite, Mississippi, 205.
Swallow-tailed, 205.
Lanius ludovicianus excubitorides, 152.
migrans, 97, 135, 152, 154, 213.
Lanivireo flavifrons, 34, 36, 98, 136, 213.
solitarius, 39, 98.
Lark, Horned, 38, 55.
Hoyt's, 38.
Prairie Horned, 55, 80, 90, 93, 104, 133, 211.
Larus argentatus, 21, 75, 82, 206.
atricilla, 75.
franklini, 206.
Limnothlypis swainsonii, 213.
Longspur, Chestnut-colored, 5.
Lapland, 55, 113, 171, 205.
Loon, 21, 75, 80, 130, 157.
Red-throated, 157, 206.
Loxia curvirostra minor, 157.
Magpie, 5.
Mallard, 4, 8, 54, 119, 130, 156, 171, 173, 206, 228.
Marila affinis, 17, 22, 82, 156.
americana, 15.
collaris, 17, 37.
marila, 82.
valisineria, 16, 156.
Mareca americana, 12, 82, 156, 207.
Martin, Purple, 24, 34, 50, 51, 97, 104, 134, 155, 162, 163, 169, 170, 171, 173, 177, 212.
Meadowlark, 23, 55, 59, 77, 91, 104, 116, 133, 170, 173, 211.
Western, 104.
Meleagris gallopavo, silvestris, 131, 209.
Melanerpes erythrocephalus, 23, 33, 87, 132, 210.
Melospiza georgiana, 24, 79, 212.
lincolni lincolni, 24, 39, 134, 212.
melospiza melodia, 24, 77, 95, 134, 212.
Merganser, 54, 155.
Red-breasted, 21, 82, 155, 156.
Mergus americanus, 155.
serrator, 21, 82, 156.
Merlin, Richardson's, 205.
Mimus polyglottos polyglottos, 136, 214.
Mniotilta varia, 24, 34, 78, 98, 135, 213.
Mockingbird, 52, 58, 104, 161, 162, 177, 214.
Molothrus ater ater, 23, 77, 90, 133, 211.
Murre, 49.
Myiarchus crinitus, 33, 89, 133, 210.
Myiochanes virens, 23, 33, 76, 89, 133, 210.
Nannus hiemalis hiemalis, 25, 143, 214.
Nettion carolinense, 21, 130, 207.
Nighthawk, 23, 74, 88, 133, 160, 170, 210, 242.
Nuthatch, Red-breasted, 25, 116, 136, 144.
White-breasted, 34, 50, 55, 104, 136, 144, 170, 173, 214, 233.
Nycticorax nycticorax nævius, 75, 208.
Oceanites oceanicus, 75.
Oidemia deglandi, 17, 75, 86, 131.
Old-squaw, 22, 83.
Olor columbianus, 83, 131.
Oporornis agilis, 21, 40, 141.
formosus, 34, 136, 141, 214.
philadelphia, 25, 135, 141, 214.
Oriole, Balitmore, 77, 92, 104, 133, 169, 170, 171, 172, 173, 211, 243, 244.
Orchard, 38, 77, 104, 133, 169, 173, 211.
Osprey, 23, 31, 86, 209.
Otocoris alpestris alpestris, 38.
hoyti, 38.
praticola, 90, 133, 211.
Otus asio asio, 33, 57, 86, 132, 209.
Oven-bird, 25, 27, 28, 78, 104, 135, 140, 141, 169, 170, 171, 172, 173, 213.
Owl, Acadian, 38.
Barn, 205.
Barred, 54, 132, 171, 173, 209.
Florida Burrowing, 117.
Great Horned, 54, 56, 57, 132, 210, 219.
Long-eared, 54, 132, 205.
Screech, 33, 54, 57, 86, 132, 159, 160, 161, 164, 169, 170, 173, 209.
Short-eared, 14, 54, 61, 132, 165, 209.
Snowy, 205.
Western Horned, 5.
Oxyechus vociferus, 22, 85, 131, 208.

Pandion haliaëtus carolinensis, 23, 86, 209.
Passer domesticus, 24, 93, 211.
Passerculus sandwichensis savanna, 24.
Passerella iliaca iliaca, 95, 134, 212.
Passerherbulus lecontei, 211.
Passerina cyanea, 34, 96, 134, 212.
Pelecanus erythrorhynchos, 206.
Pelican, White, 171, 173, 206.
Penthestes atricapillus, 25, 78, 136, 144, 215.
carolinensis carolinensis, 34, 71.
Petrel, Wilson's, 75.
Petrochelidon lunifrons, 24, 78, 97, 135.
Peucæa æstivalis bachmani, 33, 35, 134.
Pewee, Wood, 23, 33, 76, 89, 133, 162, 210.
Phalarope, Northern, 205.
Wilson's, 5, 6, 105, 208.
Phalacrocorax auritus auritus, 157, 206.
Phasianus torquatus, 85.
Pheasant, Ring-necked, 85.
Philohela minor, 22, 57, 78, 84, 131.
Phlœotomus pileatus abieticola, 23, 33, 210.
pileatus, 132.
Phœbe, 23, 33, 49, 89, 91, 104, 105, 133, 169, 170, 171, 172, 173, 210, 221.
Pigeon, Passenger, 205.
Pinicola enucleator leucura, 38.
Pintail, 5, 14, 15, 156, 207.
Pipit, 214.
Piranga erythromelas, 34, 96, 134, 212.
rubra rubra, 34, 134, 212.
Pisobia fuscicollis, 22.
maculata, 22.
minutilla, 22, 76, 84, 131, 208.
Planesticus migratorius acrusterus, 34.
migratorius, 26, 78, 136, 146, 214.
Plectrophenax nivalis, 93, 133.
Plover, Golden, 173.
Piping, 50, 51, 76, 105.
Semipalmated, 85, 105, 208.
Upland, 5, 38.
Podilymbus podiceps, 21, 81, 130, 157, 206.
Polioptila cærula cærulea, 34, 136, 145, 215.
Poœcetes gramineus, 24, 77, 134.
Poor-will, 205.
Porzana carolina, 22, 84, 208.
Progne subis, 24, 34, 97, 134, 212.
Protonotaria citrea, 39, 135, 213.
Querquedula discors, 12, 21, 131, 156, 207.
Quiscalus quiscula æneus, 23,, 77, 92, 133, 211.
quiscula, 77.
Rail, King, 208.
Sora, 22, 84.
Virginia, 22, 208.
Rallus elegans, 208.
virginianus, 208.
Raven, Northern, 26, 30.
Redhead, 4, 15, 16, 156.
Redpoll, 55, 92, 116, 159.
Redstart, 25, 28, 34, 91, 104, 136, 142, 155, 214.
Painted, 155.
Red-tail, Western, 205.
Regulus calendula calendula, 136, 145, 215.
satrapa satrapa, 136, 145, 215.
Riparia riparia, 78, 135, 213.
Robin, 26, 51, 55, 58, 59, 74, 78, 104, 116, 136, 146, 160, 162, 163, 164, 168, 169, 170, 171, 172, 174, 175, 177, 215, 222.
Southern, 34.
Rubicola minor, 208.
Sandpiper, Baird's, 105.
Buff-breasted, 118, 163.
Least, 22, 76, 84, 105, 131, 168, 208.
Pectoral, 22, 105, 205.
Semipalmated, 6, 105.
Solitary, 84, 105.
Spotted, 22, 51, 76, 80, 84, 105, 170, 172, 173, 208.
Stilt, 6.
White-rumped, 76, 105, 205.
Sapsucker, Yellow-bellied, 23, 51, 87, 108, 132, 169, 173, 210, 228, 233.
Sayornis phœbe, 23, 33, 89, 133, 210.
Scaup, Lesser, 17, 22.
Scoter, White-winged, 17, 18, 75, 83, 119, 131.
Seiurus aurocapillus, 25, 34, 78, 135, 140, 213.
motacilla, 135, 140, 214.
noveboracensis notabilis, 213.
noveboracensis, 25, 34, 140.
Setophaga ruticilla, 25, 34, 136, 142, 214.
Shoveller, 13, 105, 156, 207.
Shrike, Loggerhead, 221.
Migrant, 97, 104, 119, 135, 154, 213.
Northern, 169.
Sialia sialis sialis, 26, 34, 136, 147, 215.
Siskin, 55, 60, 93, 112, 116, 172, 173.
Sitta canadensis, 25, 134, 144.

carolinensis, 34, 136, 144, 214.
Snipe, 37, 54, 58, 84, 105, 116, 131, 191, 202, 208.
Robin, 6.
Sora, 105, 171, 173, 208.
Sparrow, Bachman's, 33, 35, 134, 206.
Chipping, 24, 33, 49, 51, 77, 91, 94, 104, 110, 134, 168, 169, 170, 171, 172, 173, 175, 177, 212, 218, 227.
Clay-colored, 104.
English, 24, 51, 88, 91, 94, 121, 143, 154, 155, 158, 162, 163, 174, 211, 221.
Field, 33, 51, 74, 77, 94, 134, 162, 168, 169, 177, 212, 218, 228.
Fox, 51, 59, 94, 134, 168, 169, 170, 173, 212.
Gambel's, 104.
Grasshopper, 94, 134, 211.
Harris', 51, 104, 171, 173, 212, 228.
Lark, 6, 38, 104, 134, 150, 211.
Leconte's, 211.
Lincoln's, 24, 38, 51, 104, 134, 169, 170, 171, 172, 173, 212, 228.
Nelson's, 173.
Savanna, 24, 51, 104, 170, 172, 173.
Song, 24, 51, 55, 59, 74, 77, 91, 104, 107, 112, 134, 168, 169, 170, 171, 172, 173, 212, 228.
Swamp, 24, 51, 79, 169, 172, 173, 212.
Tree, 40, 51, 55, 94, 107, 118, 134, 169, 173, 212, 228.
Vesper, 24, 51, 77, 94, 134, 169, 173, 205, 206.
Western Field, 104.
Western Grasshopper, 104.
White-crowned, 51, 94, 104, 134, 169, 170, 173, 212, 217, 228.
White-throated, 24, 50, 51, 94, 107, 134, 168, 169, 170, 171, 172, 173, 212, 217, 227, 228, 232.
Spatula clypeata, 13, 156, 207.
Sphyrapicus varius, 23, 87, 132, 210.
Spiza americana, 134.
Spizella monticola, 94, 134, 212.
passerina, 24, 33, 77, 94, 134, 212.
pusilla, 33, 77, 94, 134, 212.
Spoonbill, 14.
Starling, 227.
Steganopus tricolor, 208.
Stelgidopteryx serripennis, 39, 97, 213.
Sterna antillarum, 206.
dougalli, 75.
hirundo, 21, 75, 82, 206.
Strix varia varia, 132, 209.
Sturnella magna magna, 32, 77, 91, 133, 211.
Swallow, Bank, 78, 87, 135, 169, 171, 172, 173, 213.
Barn, 24, 74, 78, 104, 135, 172, 173, 212.
Cliff, 24, 78, 97, 104, 135, 172, 173.
Rough-winged, 38, 97, 104, 169, 173, 213.
Tree, 24, 104, 170, 172, 173, 177, 212.
Swan, Trumpeter, 137, 138.
Whistling, 83, 131, 207.
Swift, Chimney, 23, 33, 49, 61, 76, 88, 104, 133, 158, 168, 169, 170, 172, 173, 210, 222, 232.
Tanager, Scarlet, 34, 91, 104, 134, 212, 243.
Summer, 34, 134, 162, 212.
Western, 155.
Teal, Blue-winged, 21, 130, 207.
Telmatodytes palustris iliacus, 214.
palustris, 136.
Tern, Black, 170, 172, 173, 206.
Cabot, 171, 173.
Caspian, 21, 168, 173.
Common, 6, 8, 21, 75, 82, 168, 170, 173, 206.
Forster's, 49.
Least, 206.
Roseate, 75.
Royal, 171, 173.
Thrasher, Brown, 34, 36, 45, 50, 52, 74, 104, 105, 112, 136, 142, 150, 162, 168, 169, 170, 171, 172, 173, 214.
Thrush, Gray-cheeked, 104, 169, 170, 172, 174, 219.
Hermit, 51, 125, 136, 146, 169, 170, 172, 174.
Olive-backed, 25, 104, 136, 146, 169, 172, 174, 215, 219.
Willow, 206.
Wilson's, 136.
Wood, 34, 50, 91, 104, 136, 146, 160, 162, 169, 171, 173, 215, 243.
Thryomanes bewicki bewicki, 34, 40, 136, 214.
Thryothorus ludovicianus ludovicianus, 34, 236, 143, 159, 214.
Totanus flavipes, 22, 208.
melanoleucus, 22.
Towhee, 33, 59, 77, 94, 104, 108, 116, 134, 169, 173, 212.
Arctic, 104.

Toxostoma rufum, 34, 36, 136, 142, 214.
Tringites subruficollis, 163.
Troglodytes aëdon aëdon, 25, 143, 214.
Turkey, Wild, 26, 30, 129, 131, 164, 209.
Tympanuchus americanus americanus, 38.
Tyrannus tyrannus, 23, 33, 76, 88, 133, 210.
Veery, 25, 146.
Vermivora celata, 39, 213.
chrysoptera, 98.
peregrina, 99, 135, 215.
pinus, 34, 39, 55, 98, 213.
rubricapilla, 99, 135
Vireo griseus, 34, 135, 215.
Vireo, Bell's, 36, 104, 215.
Philadelphia, 39.
Red-eyed, 24, 34, 36, 78, 91, 97, 104, 135, 162, 172, 173, 213.
Warbling, 34, 36, 98, 104,, 135.
Western Warbling,
White-eyed, 34, 36, 98, 135.
Yellow-throated, 34, 36, 98, 104, 105, 135, 213.
Vireosylva gilva, 34, 36, 98, 135.
olivacea, 24, 34, 78, 97, 135, 213.
philadelphia, 39.
Vulture, Black, 31, 58, 117, 132, 209, 217.
Turkey, 30, 33, 58, 104, 131, 209, 217.
Warbler, Bachman's, 115.
Bay-breasted, 139.
Black and White, 24, 27, 28, 34, 51, 78, 98, 104, 108, 135, 213, 228, 233.
Blackburnian, 25, 139, 155, 206.
Black-poll, 139.
Black-throated Blue, 24, 138, 206.
Black-throated Green, 25, 27, 28, 34, 136, 140, 206.
Blue-winged, 28, 34, 39, 55, 56, 98, 213.
Cairn's, 28, 29, 34.
Canada, 25, 136, 142, 214.
Cape May, 40, 99, 135, 206.
Cerulean, 28, 34, 104, 139.
Chestnut-sided, 74, 78, 139.
Connecticut, 25, 40, 141.
Golden-winged, 98, 206.
Hooded, 27, 28, 34, 141, 214.
Kentucky, 28, 34, 90, 104, 136, 141, 214.
Magnolia, 24, 135, 139, 213.
Mourning, 25, 135, 141, 169, 172, 173, 214.
Myrtle, 24, 40, 59, 104, 116, 135, 138, 213.
Nashville, 99, 135.
Northern Parula, 28, 34, 99, 135, 213.
Orange-crowned, 39, 40, 172, 173, 213.
Palm, 206, 219.
Pine, 27, 28, 34, 36, 40.
Prairie, 27, 28, 34, 79, 213.
Prothonotary, 39, 135, 213.
Swainson's, 163, 213.
Sycamore, 213.
Tennessee, 99, 104, 135, 215.
Wilson's, 25, 142.
Worm-eating, 28, 55, 56, 98, 135, 215.
Yellow, 24, 78, 90, 91, 99, 104, 136, 162, 170, 171, 173, 213.
Yellow Palm, 140.
Yellow-throated, 28, 34.
Water-Thrush, 25, 140, 169, 173, 219.
Grinnell's, 213.
Louisiana, 27, 28, 34, 91, 104, 135, 140, 214.
Water-Turkey, 130.
Waxwing, Bohemian, 39, 49, 55, 60, 107, 170, 173.
Cedar, 24, 34, 55, 63, 69, 70, 104, 107, 116, 125, 135, 170, 172, 173, 213, 229.
Whip-poor-will, 33, 133, 161, 162, 210, 219, 242, 243.
Willet, 5.
Western, 208.
Wilsonia canadensis, 25, 136, 142, 214.
citrina, 34, 141, 214.
pusilla, 25, 142.
Woodcock, 22, 57, 78, 84, 131, 208.
Woodpecker, Downy, 23, 29, 33, 50, 55, 74, 76, 87, 108, 162, 169, 170, 172, 173, 210, 218, 228, 233.
Hairy, 23, 29, 33, 51, 55, 87, 104, 108, 132, 170, 172, 210, 228, 233.
Ivory-billed, 205.
Northern Downy, 104.
Northern Pileated, 23, 55.
Pileated, 29, 33, 132, 218.
Red-bellied, 29, 33, 38, 55, 63, 64, 65, 66, 104, 132, 169, 210, 218.
Red-cockaded, 29.
Red-headed, 23, 29, 33, 55, 58, 87, 104, 108, 116, 118, 132, 150, 162, 168, 169, 170, 171, 172, 173, 210.
Southern Downy, 132.

Wren, Bewick's, 34, 40, 136, 214.
Carolina, 34, 50, 136, 143, 159, 170, 173, 214.
House, 25, 51, 115, 143, 159, 168, 169, 170, 172, 173, 214, 222, 229, 232.
Long-billed Marsh, 136, 172, 173.
Prairie Marsh, 214.
Short-billed Marsh, 40.
Winter, 25, 143, 214.
Xanthocephalus xanthocephalus, 211.
Yellow-legs, 22, 105, 208, 243.
Greater, 22, 105.
Yellow-throat, Maryland, 25, 28, 74, 78, 91, 104, 135, 141, 169, 173, 214, 219.
Zamelodia ludoviciana, 96, 134.
Zenaidura macroura carolinensis, 33, 85, 100, 131, 209.
peninsulari, 100.
Zonotrichia albicollis, 24, 134, 212.
leucophrys leucophrys, 134, 212.
querula, 212.